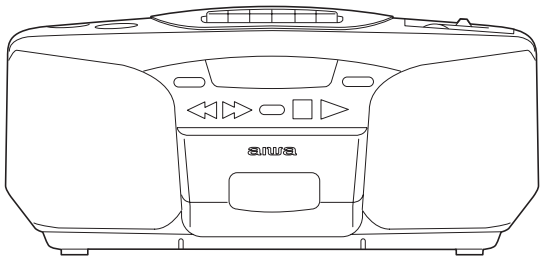
aiwa
SERVICE

CSD-A110 U(S)
CSD-A170 LH(S)



SERVICE MANUAL

COMPACT DISC RADIO
CASSETTE RECORDER

- BASIC TAPE MECHANISM : ZZM-1 YR2NF
- BASIC CD MECHANISM : DA11T3C

aiwa

S/M Code No. 09-003-342-2R1

SPECIFICATIONS

U MODEL

Tuner section
Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna, AM: 530 - 1,710 kHz Ferrite bar antenna

Deck section
Track format — 4 tracks, 2 channels / Frequency range — Normal tape: 50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system — Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

CD player section
Disc — Compact disc / Scanning method — Non-contact optical scanner (semiconductor laser)

General
Speaker — 100 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ 7 ohms, T.H.D. 10%) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 120 V, 60 Hz / Power consumption — 15 W / Dimensions — 420 (W) × 185 (H) × 250 (D) mm ($16^{5}/_{8} \times 7^{3}/_{8} \times 9^{7}/_{8}$ in.) / Weight — 3.45 kg (7 lbs. 10 oz.) (excluding batteries)

- Design and specifications are subject to change without notice.

LH MODEL

Tuner section
Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna, AM: 530 - 1,710 kHz Ferrite bar antenna

Deck section
Track format — 4 tracks, 2 channels / Frequency range — Normal tape: 50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system — Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

CD player section
Disc — Compact disc / Scanning method — Non-contact optical scanner (semiconductor laser)

General
Speaker — 100 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ 7 ohms, T.H.D. 10%), 1.9 W + 1.9 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 110 - 120 V/220 - 240 V switchable, 50/60 Hz / Power consumption — 14 W / Dimensions — 420 (W) × 185 (H) × 250 (D) mm / Weight — 3.45 kg (excluding batteries)

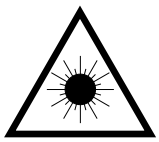
- Design and specifications are subject to change without notice.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

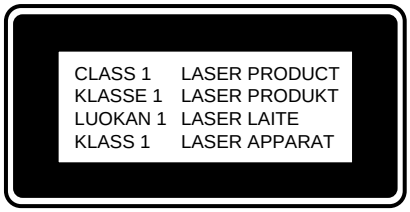
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

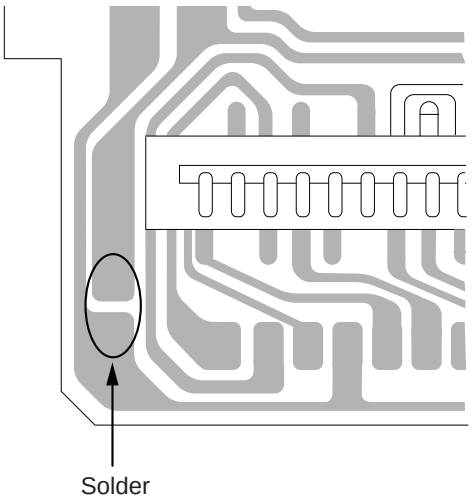
This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

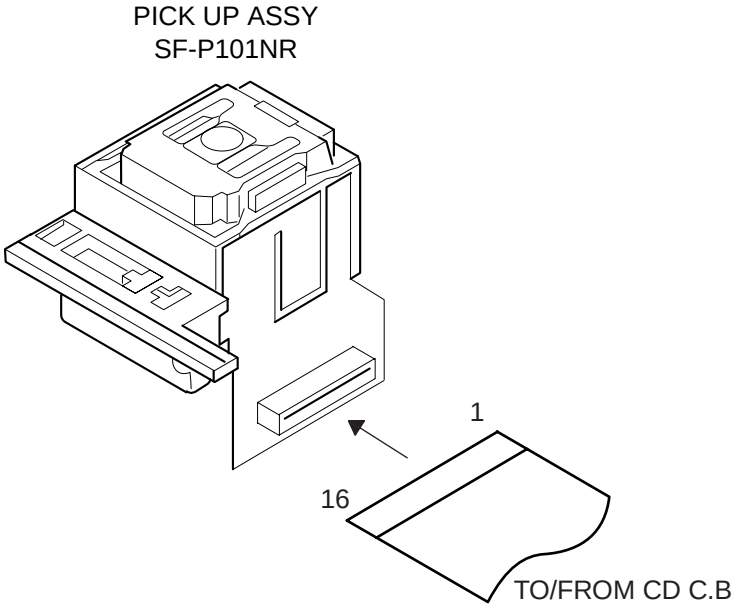


Precaution to replace Optical block (SF-P101NR)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.





ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-955-010		IC,LA1828
	87-A21-064-010		IC,LA4227
	87-A21-520-040		C-IC,M61509FP
	87-A20-446-010		C-IC,LA9241ML
	87-A20-459-010		C-IC,LC78622ED
	87-A21-093-010		IC,LA6541D
	8A-CD9-610-010		C-IC,LC865516A-5P16
	87-A20-650-010		IC,RPM6938-V11<A170 LH<S>>
	87-A21-431-010		IC,BA4560N
TRANSISTOR			
	89-327-143-080		TR,2SC2714 (0.1W)
	87-026-447-080		TR,2SC1740S R
	87-026-463-080		TR,2SA933S (0.3W)
	87-026-213-080		CHIP-TR,DTC114YK
	89-112-965-080		TR,2SA1296 (0.75W)
	87-026-291-080		TR,DTC124XS
	89-213-702-010		TR,2SB1370 (1.8W)
	87-026-462-080		TR,2SC1740 S(RS 0.3W)
	89-318-154-080		TR,2SC1815 (0.4W)
	89-109-332-380		TR,2SA933RS
	89-113-187-080		TR,2SA1318TU
	87-026-295-080		TR,DTC144TK
	87-026-237-080		CHIP-TR,DTC124XK<A170 LH<S>>
	89-317-403-080		TR,2SC1740S
	87-026-239-080		TR,DTC114TK (0.2W)
	87-026-464-080		TR,DTC114TS (0.3W)
DIODE			
	87-020-465-080		DIODE,1SS133 (110MA)
	87-A40-128-080		C-VARI-CAP,HVU202A
	87-027-399-080		ZENER,HZ7A3L (200MA)<A170 LH<S>>
	87-A40-509-080		ZENER,MTZJ6.8C<A110 U<S>>
	87-070-345-080		DIODE,IN4148
	87-A40-648-080		ZENER,MTZJ8.2A
	87-017-978-080		DIODE,1N4003
	87-017-932-080		ZENER,MTJ6.2B<A110 U<S>>
	87-A40-465-010		DIODE,FR202
MAIN C.B			
C211	87-A11-603-080		CAP, S 0.15-16<A170 LH<S>>
C212	87-A11-603-080		CAP, S 0.15-16<A170 LH<S>>
C215	87-016-460-080		C-CAP,S 0.22-16 B
C216	87-016-460-080		C-CAP,S 0.22-16 B
C231	87-010-213-080		C-CAP,S 0.015-50 B
C232	87-010-213-080		C-CAP,S 0.015-50 B
C233	87-A10-201-080		C-CAP,S0.33-16 KB
C234	87-A10-201-080		C-CAP,S0.33-16 KB
C235	87-016-669-080		C-CAP,S 0.1-25 K B
C236	87-016-669-080		C-CAP,S 0.1-25 K B
C237	87-010-371-080		CAP, ELECT 470-6.3V
C239	87-010-197-080		CAP, CHIP 0.01 DM
C239	87-010-805-080		CAP, S 1-16<A110 U<S>>
C240	87-010-197-080		CAP, CHIP 0.01 DM
C240	87-010-805-080		CAP, S 1-16<A110 U<S>>
C247	87-010-401-080		CAP, ELECT 1-50V
C248	87-010-401-080		CAP, ELECT 1-50V
C310	87-010-248-080		CAP, ELECT 220-10V
C316	87-010-263-080		CAP,E 100-10
C317	87-010-197-080		CAP, CHIP 0.01 DM
C801	87-010-248-080		CAP, ELECT 220-10V
C805	87-012-365-080		C-CAP,S 0.027-25VBK
C806	87-012-365-080		C-CAP,S 0.027-25VBK
C807	87-010-405-080		CAP, ELECT 10-50V
C808	87-010-405-080		CAP, ELECT 10-50V
C809	87-010-405-080		CAP, ELECT 10-50V
C810	87-010-401-080		CAP, ELECT 1-50V
C811	87-010-178-080		CHIP CAP 1000P
C812	87-010-178-080		CHIP CAP 1000P
C816	87-010-180-080		C-CER 1500P
C817	87-010-180-080		C-CER 1500P
C821	87-010-401-080		CAP, ELECT 1-50V
C822	87-010-401-080		CAP, ELECT 1-50V
C823	87-010-178-080		CHIP CAP 1000P
C824	87-010-178-080		CHIP CAP 1000P
C829	87-010-178-080		CHIP CAP 1000P
C830	87-010-178-080		CHIP CAP 1000P
C833	87-018-195-080		CAP, CER 1200P-16V
C834	87-010-248-080		CAP, ELECT 220-10V
C835	87-010-322-080		C-CAP,S 100P-50 CH
C836	87-010-322-080		C-CAP,S 100P-50 CH
C843	87-010-197-080		CAP, CHIP 0.01 DM
C844	87-018-124-080		CAP, CER 270P-50V
C845	87-010-178-080		CHIP CAP 1000P
C846	87-010-263-080		CAP, ELECT 100-10V
C851	87-010-186-080		CAP,CHIP 4700P
C852	87-010-178-080		CHIP CAP 1000P
C853	87-018-211-080		CAP, CER 0.01-50<A170 LH<S>>
C853	87-A11-145-080		CAP,TC U 0.01-50 Z F<A110 U<S>>
CN201	87-099-018-010		CONN,16P
CN801	87-A60-110-010		CONN,4P V S2M-4W
CNA302	8A-CDA-629-010		CONN ASSY,6P MA-TU
CNA801	8A-CD9-630-010		CONN ASSY, 4P RPH
L801	87-007-342-010		COIL,OSC 85K BIAS
SW801	8Z-CD9-609-010		SW,SL 1-6-2 PS62D01
CD C.B			
C30	87-010-260-080		CAP, ELECT 47-25V
C261	87-010-402-080		CAP, ELECT 2.2-50V
C262	87-010-402-080		CAP, ELECT 2.2-50V
C263	87-010-178-080		CHIP CAP 1000P
C264	87-010-178-080		CHIP CAP 1000P
C265	87-010-263-080		CAP, ELECT 100-10V
C266	87-010-263-080		CAP, ELECT 100-10V
C267	87-010-112-080		CAP, ELECT 100-16V
C268	87-010-112-080		CAP, ELECT 100-16V
C271	87-010-237-080		CAP, ELECT 1000-16V
C272	87-010-237-080		CAP, ELECT 1000-16V
C278	87-010-405-080		CAP, ELECT 10-50V
C279	87-010-385-080		CAP, ELECT 220-25V
⚠C301	87-016-495-000		CAP,E 3300-25 M SMG
C306	87-010-404-080		CAP, ELECT 4.7-50V
C307	87-010-401-080		CAP, ELECT 1-50V
C308	87-010-221-080		CAP, ELECT 470-10V
C311	87-010-263-080		CAP, ELECT 100-10V
C312	87-010-385-080		CAP, ELECT 220-25V
C321	87-010-197-080		CAP, CHIP 0.01 DM
C322	87-010-263-080		CAP, ELECT 100-10V
C325	87-010-405-080		CAP, ELECT 10-50V
C401	87-010-403-080		CAP, ELECT 3.3-50V
C402	87-010-197-080		CAP, CHIP 0.01 DM
C403	87-010-263-080		CAP, ELECT 100-10V
C404	87-010-248-080		CAP, ELECT 220-10V
C406	87-010-374-080		CAP, ELECT 47-10V
C407	87-010-178-080		CHIP CAP 1000P
C408	87-010-198-080		CAP, CHIP 0.022
C409	87-010-248-080		CAP, ELECT 220-10V
C410	87-010-263-080		CAP, ELECT 100-10V
C411	87-A11-177-080		C-CAP,S 0.15-16 K B
C412	87-010-401-080		CAP, ELECT 1-50V
C413	87-016-369-080		C-CAP,S 0.033-25 B K
C414	87-010-405-080		CAP, ELECT 10-50V
C416	87-010-545-080		CAP, ELECT 0.22-50V
C417	87-012-157-080		C-CAP,S 330P-50 CH

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C418	87-010-213-080		C-CAP,S 0.015-50 B
C419	87-A11-608-080		C-CAP,S 0.33-25 K B
C420	87-016-369-080		C-CAP,S 0.033-25 B K
C421	87-A11-177-080		C-CAP,S 0.15-16 K B
C422	87-010-184-080		CHIP CAPACITOR 3300P(K)
C423	87-010-992-080		C-CAP,S 0.047-25 B
C424	87-A11-606-080		C-CAP,S 0.22-25 K B
C425	87-010-176-080		C-CAP,S 680P-50 SL
C426	87-A11-608-080		C-CAP,S 0.33-25 K B
C428	87-010-197-080		CAP, CHIP 0.01 DM
C429	87-010-186-080		CAP,CHIP 4700P
C430	87-012-156-080		C-CAP,S 220P-50 CH
C431	87-010-545-080		CAP, ELECT 0.22-50V
C432	87-010-374-080		CAP, ELECT 47-10V
C433	87-010-401-080		CAP, ELECT 1-50V
C434	87-010-184-080		CHIP CAPACITOR 3300P(K)
C435	87-010-197-080		CAP, CHIP 0.01 DM
C436	87-010-374-080		CAP, ELECT 47-10V
C437	87-010-404-080		CAP, ELECT 4.7-50V
C438	87-016-669-080		C-CAP,S 0.1-25 K B
C439	87-010-178-080		CHIP CAP 1000P
C441	87-010-197-080		CAP, CHIP 0.01 DM
C442	87-010-313-080		CAP, CHIP 18P
C445	87-012-368-080		C-CAP,S 0.1-50 F
C446	87-012-368-080		C-CAP,S 0.1-50 F
C447	87-012-368-080		C-CAP,S 0.1-50 F
C448	87-010-315-080		C-CAP,S 27P-50 CH
C450	87-012-140-080		CAP 470P
C451	87-012-156-080		C-CAP,S 220P-50 CH
C455	87-010-247-080		CAP, ELECT 100-50V
C457	87-010-312-080		C-CAP,S 15P-50 CH
C458	87-010-312-080		C-CAP,S 15P-50 CH
C459	87-010-263-080		CAP, ELECT 100-10V
C460	87-015-819-080		CAPACITOR,0.01
C461	87-010-197-080		CAP, CHIP 0.01 DM
C462	87-010-248-080		CAP, ELECT 220-10V
C463	87-010-197-080		CAP, CHIP 0.01 DM
C465	87-010-404-080		CAP, ELECT 4.7-50V
C466	87-012-368-080		C-CAP,S 0.1-50 F
C467	87-010-263-080		CAP, ELECT 100-10V
C469	87-012-154-080		C-CAP,S 150P-50 CH
C470	87-010-544-080		CAP, ELECT 0.1-50V
C471	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C472	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C473	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C474	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C475	87-010-197-080		CAP, CHIP 0.01 DM
C476	87-010-236-080		CAP,E 1000-10 SME
C477	87-010-197-080		CAP, CHIP 0.01 DM
C478	87-010-263-080		CAP, ELECT 100-10V
C479	87-010-197-080		CAP, CHIP 0.01 DM
C480	87-010-221-080		CAP, ELECT 470-10V
C481	87-010-405-080		CAP, ELECT 10-50V
C482	87-010-405-080		CAP, ELECT 10-50V
C489	87-012-368-080		C-CAP,S 0.1-50 F
C490	87-012-368-080		C-CAP,S 0.1-50 F
C491	87-010-197-080		CAP, CHIP 0.01 DM
C492	87-010-221-080		CAP, ELECT 470-10V
C494	87-010-197-080		CAP, CHIP 0.01 DM
C501	87-012-368-080		C-CAP,S 0.1-50 F
C502	87-010-322-080		C-CAP,S 100P-50 CH
C503	87-010-322-080		C-CAP,S 100P-50 CH
C504	87-010-322-080		C-CAP,S 100P-50 CH
C505	87-010-322-080		C-CAP,S 100P-50 CH
C506	87-010-322-080		C-CAP,S 100P-50 CH
C510	87-016-669-080		C-CAP,S 0.1-25 K B
C831	87-010-198-080		CAP, CHIP 0.022
CN202	8A-CH4-689-010		CONN,3P V 2.5
CN205	87-A60-109-010		CONN,2P V S2M-2W
CN301	8A-CH4-689-010		CONN,3P V 2.5
CN401	87-A60-424-010		CONN,16P V TOC-B
CN403	87-099-201-010		CONN,8P 6216 H
CN802	8A-CH4-687-010		CONN,4P V 2.5
CNA205	8A-CD9-626-010		CONN ASSY, 2P DOOR
CNA402	8A-CDA-625-010		CONN ASSY,6P CD-ME
CNA802	8A-CD9-631-010		CONN ASSY, 4P TP-ME
L401	87-003-102-080		COIL, 10UH
L404	87-003-152-080		COIL, 100UH
R840	87-029-124-010		RES,FUSE 2.2-1/4
SFR430	87-024-437-080		SFR100K,RH063EC
X401	8Z-CD5-633-010		VIB, CER16.93MHZ FCR16.93M2

FRONT C.B

C601	87-010-313-080		CAP, CHIP 18P
C602	87-010-315-080		C-CAP,S 27P-50 CH
C603	87-010-319-080		C-CAP,S 56P-50 CH
C604	87-010-317-010		CHIP CAP,S 39P CH
C605	87-010-264-040		CAP,E 100-10 5L
C606	87-012-368-080		C-CAP,S 0.1-50 F
C607	87-015-779-010		CHIP CAPACITOR, 0.01
C608	87-010-415-080		CAP ELE SRE 10-50V<A110 U<S>>
C608	87-010-405-080		CAP, ELECT 10-50V<A170 LH<S>>
C609	87-010-400-080		CAP, ELECT 0.47-50V<A170 LH<S>>
C609	87-010-493-080		CAP,E 0.47-50 GAS<A110 U<S>>
C610	87-010-178-010		CAP, S 1000P-50<A170 LH<S>>
C611	87-A10-189-040		CAP,E 220-10
C612	87-010-405-080		CAP, ELECT 10-50V<A170 LH<S>>
C613	87-012-368-080		C-CAP,S 0.1-50 F
C614	87-010-312-080		C-CAP,S 15P-50 CH
CN601	87-099-033-010		16P 6216 H<A170 LH<S>>
CN601	87-099-757-010		CONN,16P 9604S F<A110 U<S>>
CN602	87-A60-079-010		CONN,08P H 9604S-08F<A110 U<S>>
CN602	87-099-201-010		CONN,8P 6216 H<A170 LH<S>>
CNA604	8A-CDA-623-010		CONN ASSY,7P KEY
L601	87-003-102-080		COIL, 10UH
LED602	88-CD6-630-010		LED,934ID RED
LED608	88-CD6-630-010		LED,934ID RED
LED610	88-CD6-631-010		LED,934GD GRN
LED611	87-CD8-616-010		LED,SA36-11 HWA-11.0
S601	87-A91-704-080		SW,TACT EVQ 214 05R<A110 U<S>>
S601	87-A90-696-080		SW,TACT TS2103-03-430<A170 LH<S>>
S602	87-A91-704-080		SW,TACT EVQ 214 05R<A110 U<S>>
S602	87-A90-696-080		SW,TACT TS2103-03-430<A170 LH<S>>
S603	87-A91-704-080		SW,TACT EVQ 214 05R<A110 U<S>>
S603	87-A90-696-080		SW,TACT TS2103-03-430<A170 LH<S>>
S604	87-A91-704-080		SW,TACT EVQ 214 05R<A110 U<S>>
S604	87-A90-696-080		SW,TACT TS2103-03-430<A170 LH<S>>
S605	87-A91-704-080		SW,TACT EVQ 214 05R<A110 U<S>>
S605	87-A90-696-080		SW,TACT TS2103-03-430<A170 LH<S>>
S609	87-A91-704-080		SW,TACT EVQ 214 05R<A110 U<S>>
S609	87-A90-696-080		SW,TACT TS2103-03-430<A170 LH<S>>
S611	87-A91-704-080		SW,TACT EVQ 214 05R<A110 U<S>>
S611	87-A90-696-080		SW,TACT TS2103-03-430<A170 LH<S>>
X601	87-030-273-010		VIB,XTAL 32.768K5PPM
X602	87-030-376-080		VIB,CER CSA5.76MG200

TUNER C.B

C1	87-010-314-080		C-CAP,S 22P-50V
C2	87-010-316-080		C-CAP,S 33P-50 CH
C3	87-010-314-080		C-CAP,S 22P-50V
C4	87-010-148-080		CAP, CHIP S 75P SL
C5	87-010-378-080		CAP, ELECT 10-16V
C7	87-012-156-080		C-CAP,S 220P-50 CH
C9	87-010-311-080		CAP 12P
C11	87-010-152-080		C-CAP,S 8P-50 CH
C12	87-010-314-080		C-CAP,S 22P-50V
C13	87-010-322-080		C-CAP,S 100P-50 CH

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C15	87-016-669-080		C-CAP,S 0.1-25 K B
C16	87-010-178-080		CHIP CAP 1000P
C17	87-016-669-080		C-CAP,S 0.1-25 K B
C18	87-010-198-080		CAP, CHIP 0.022
C19	87-016-669-080		C-CAP,S 0.1-25 K B
C20	87-010-400-080		CAP, ELECT 0.47-50V
C21	87-010-403-080		CAP, ELECT 3.3-50V
C26	87-012-358-080		C-CAP,S 0.47-10 F Z
C27	87-012-358-080		C-CAP,S 0.47-10 F Z
C28	87-010-992-080		C-CAP,S 0.047-25 B
C29	87-010-992-080		C-CAP,S 0.047-25 B
C30	87-010-248-080		CAP, ELECT 220-10V
C31	87-010-379-080		CAP, ELECT 22-16V
C36	87-010-263-080		CAP, ELECT 100-10V
C38	87-010-197-080		CAP, CHIP 0.01 DM
C51	87-010-197-080		CAP, CHIP 0.01 DM
CF1	87-A90-128-010		FLTR,AM IF CFAL-455
CF2	87-008-261-010		FILTER, SFE10.7MA5-A
CF3	87-008-261-010		FILTER, SFE10.7MA5-A
CN2	87-A60-116-010		CONN,6P H S2M-6WR
L2	87-A50-560-010		COIL,FM BPF(ACD)
L3	8A-CD9-660-010		BAR-ANT,MW 2B-ACD(COI)
L4	87-A50-562-010		COIL,FM RF EX(ACD)
L6	87-A50-337-010		COIL,AM OSC (TOKO)
L7	87-A50-579-010		COIL,AM IFT(ACD)
L8	87-A50-335-010		COIL,FM IFT (TOKO)
L9	87-A50-577-010		COIL,FM DET(ACD)
L10	87-005-849-080		COIL,10UH(CECS)
S1	87-A91-548-010		SW,SL-2-3 SK23E01G06
VC1	87-A91-167-010		TUN-CAP,20P-160P FA-22125 N000
HP C.B			
CN204	87-A60-685-010		CONN,4P H WHT EH
CN605	87-A60-117-010		CONN,7P H S2M-7WR
CNA203	8A-CDA-628-010		CONN ASSY,4P MA-HP
J251	87-A60-569-010		JACK,HTJ-035-18
LED606	88-CD6-630-010		LED,934ID RED
LED607	88-CD6-630-010		LED,934ID RED
S606	87-A90-696-080		SW,TACT TS2103-03-430<A170 LH<S>>
S607	87-A90-696-080		SW,TACT TS2103-03-430<A170 LH<S>>
S608	87-A90-696-080		SW,TACT TS2103-03-430<A170 LH<S>>
S614	87-A90-696-080		SW,TACT TS2103-03-430<A170 LH<S>>
S615	87-A90-696-080		SW,TACT TS2103-03-430<A170 LH<S>>
BATT1 C.B			
C901	87-010-192-080		C-CAP,S 0.022-50 F
C902	87-010-192-080		C-CAP,S 0.022-50 F
C903	87-010-192-080		C-CAP,S 0.022-50 F
C904	87-010-192-080		C-CAP,S 0.022-50 F
CNA901	8A-CDA-627-010		CONN ASSY,3P PWR
⚠PR901	87-A90-092-080		PROTECTOR,2.5A 491<A170 LH<S>>
SP901	87-CD6-213-010		SPR-C,BATT (-)
SP902	87-CD6-213-010		SPR-C,BATT (-)
BATT2 C.B			
SP903	87-CD6-213-010		SPR-C,BATT (-)
SP904	87-CD6-213-010		SPR-C,BATT (-)
MOTOR C.B			
M2	9X-262-576-910		MOTOR GEAR ASSY
PIN3	91-564-722-110		CONNECTOR 6P
SW1	91-572-085-120		LEAF SW

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
VOLSEL C.B<A170 LH<S>>			
⚠FC901	87-033-213-010		CLAMP,FUSE SMK<A170 LH<S>>
⚠FC902	87-033-213-010		CLAMP,FUSE SMK<A170 LH<S>>
⚠F901	87-035-347-010		FUSE,2.5A 250V T<A170 LH<S>>

- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding

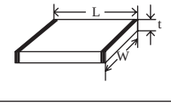
8 8 − □ □ □ □ □ □

A
抵抗部品コード
Resistor Code

桁表示
Figure

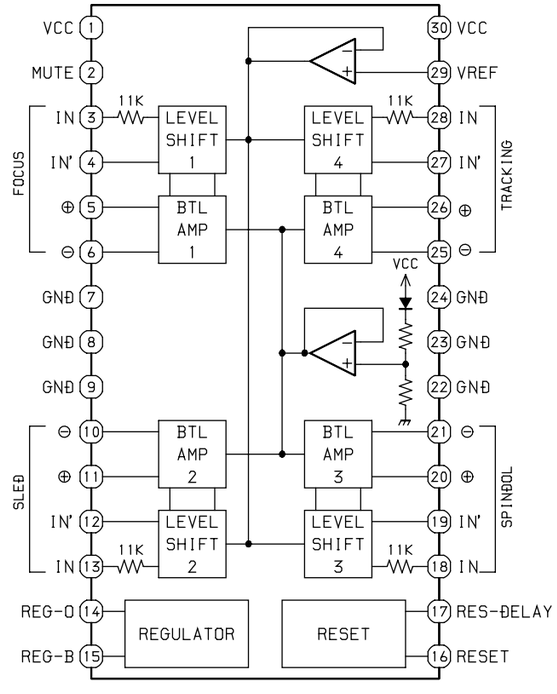
抵抗値
Value of resistor

チップ抵抗
Chip resistor

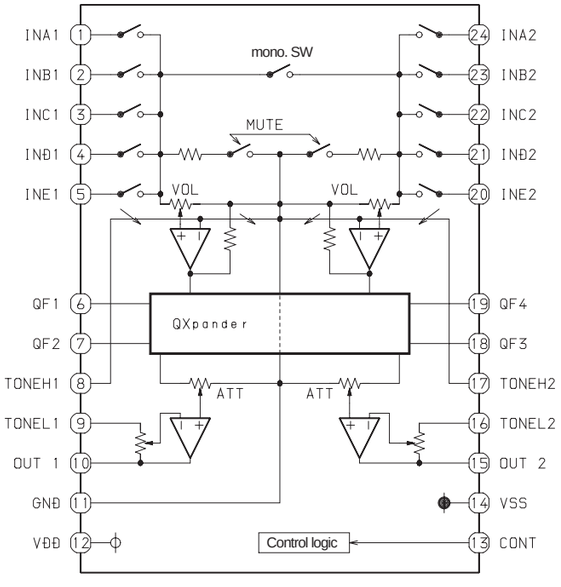
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード ：A Resistor Code ：A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

IC BLOCK DIAGRAM

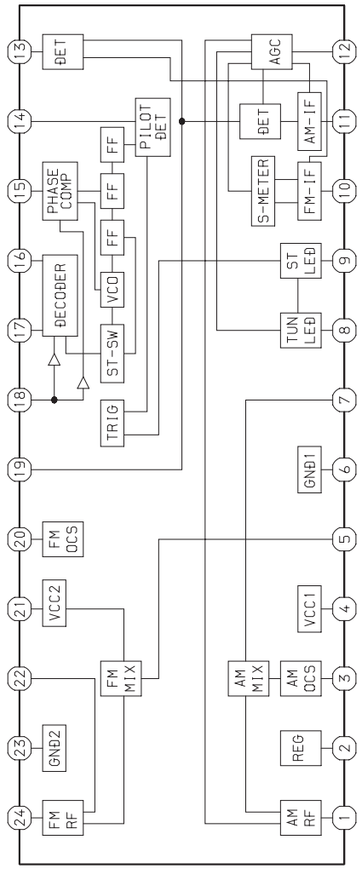
IC, LA6541D



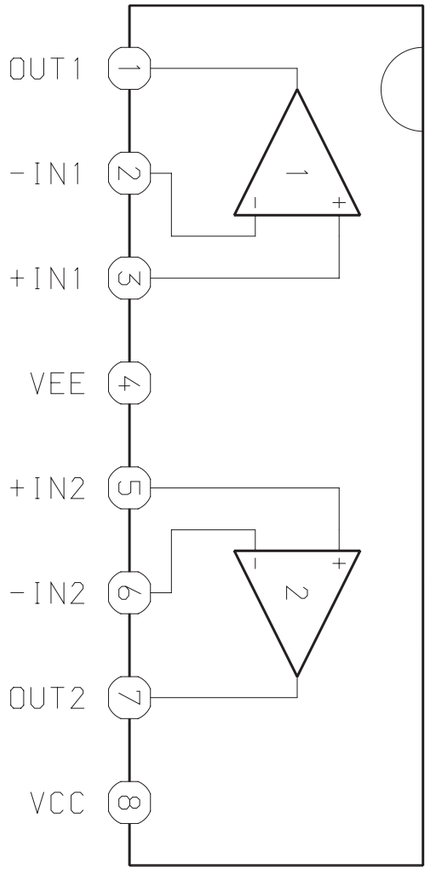
IC, M61509FP

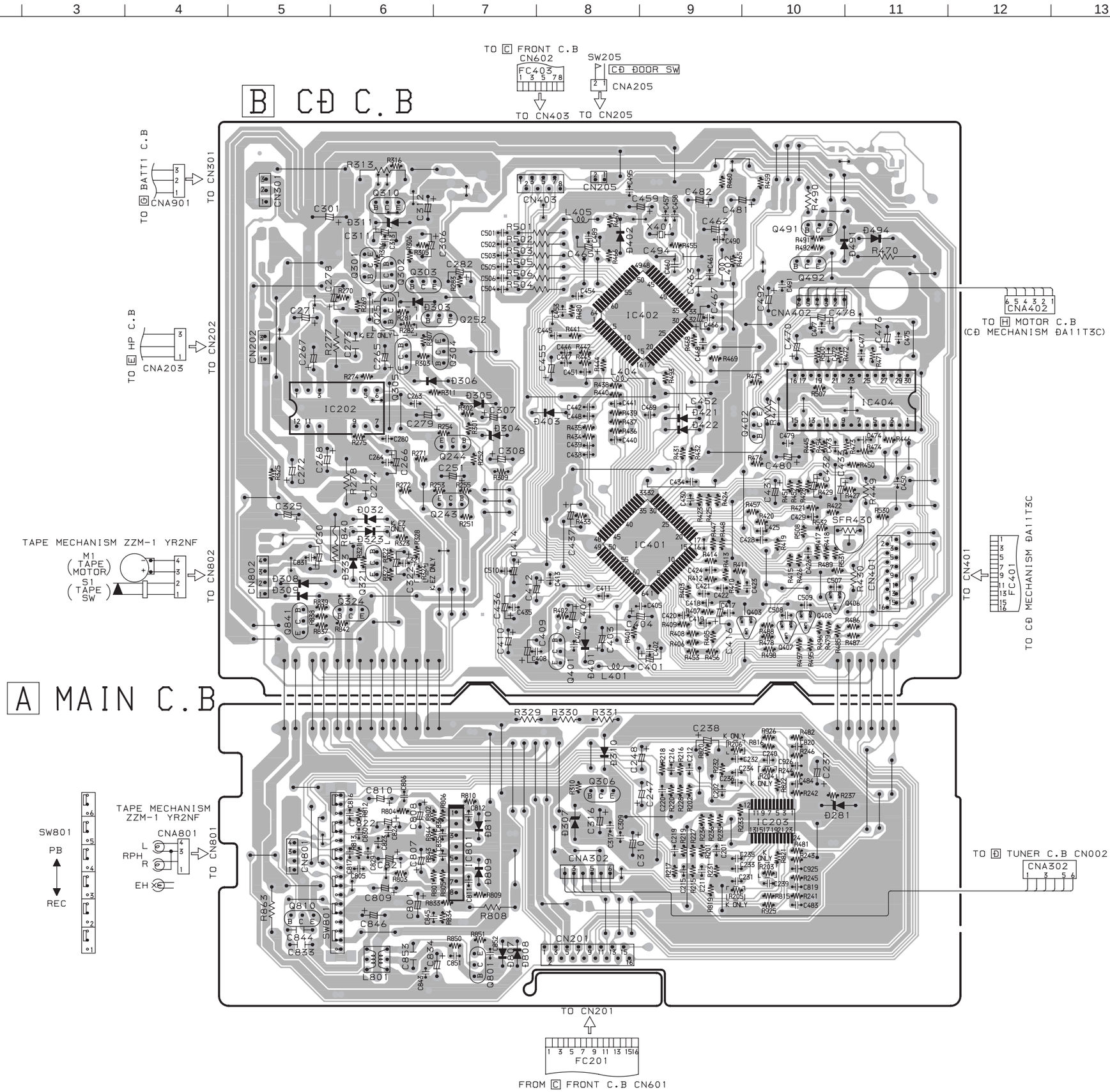


IC, LA1828

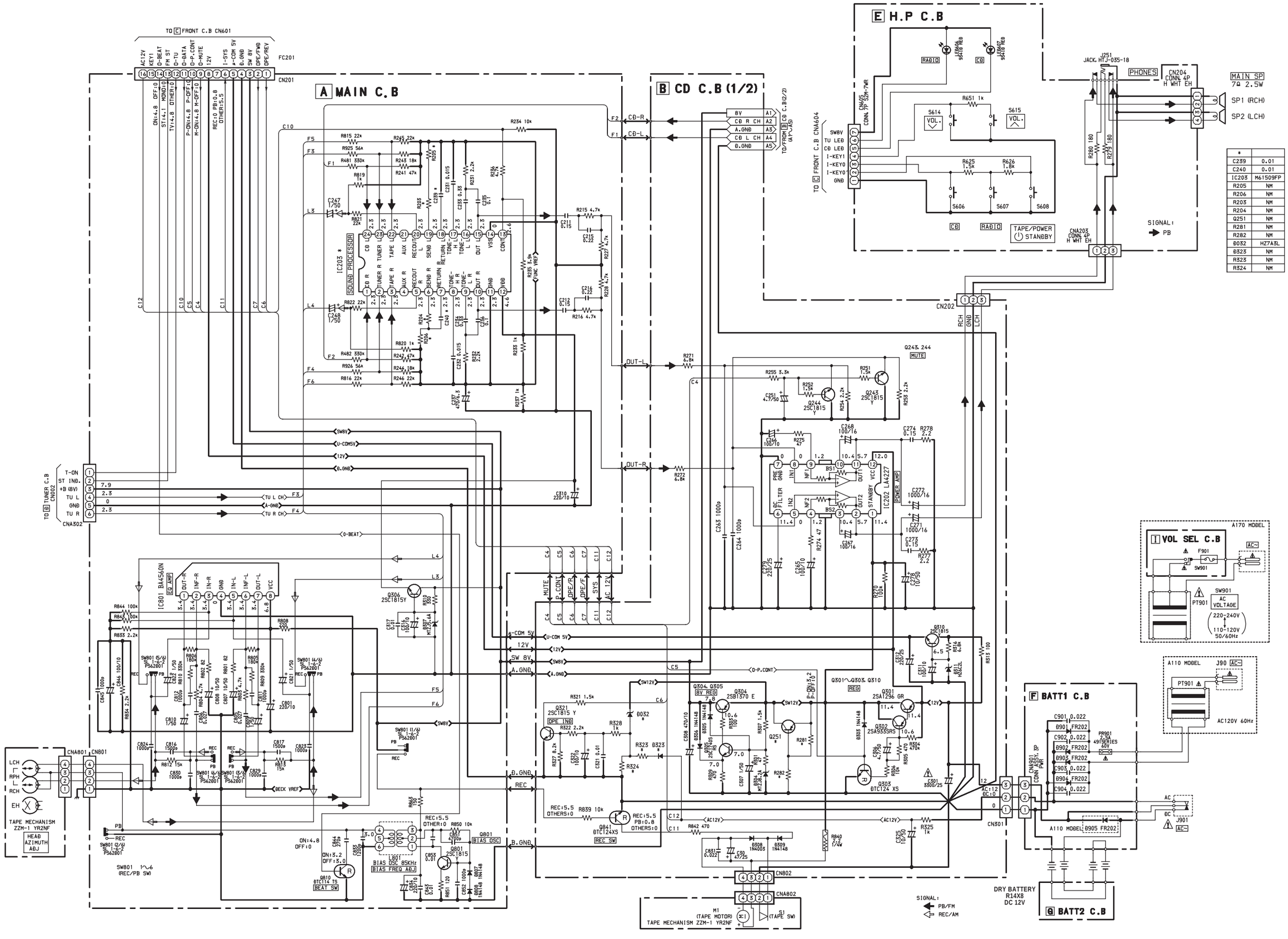


IC, BA4560N

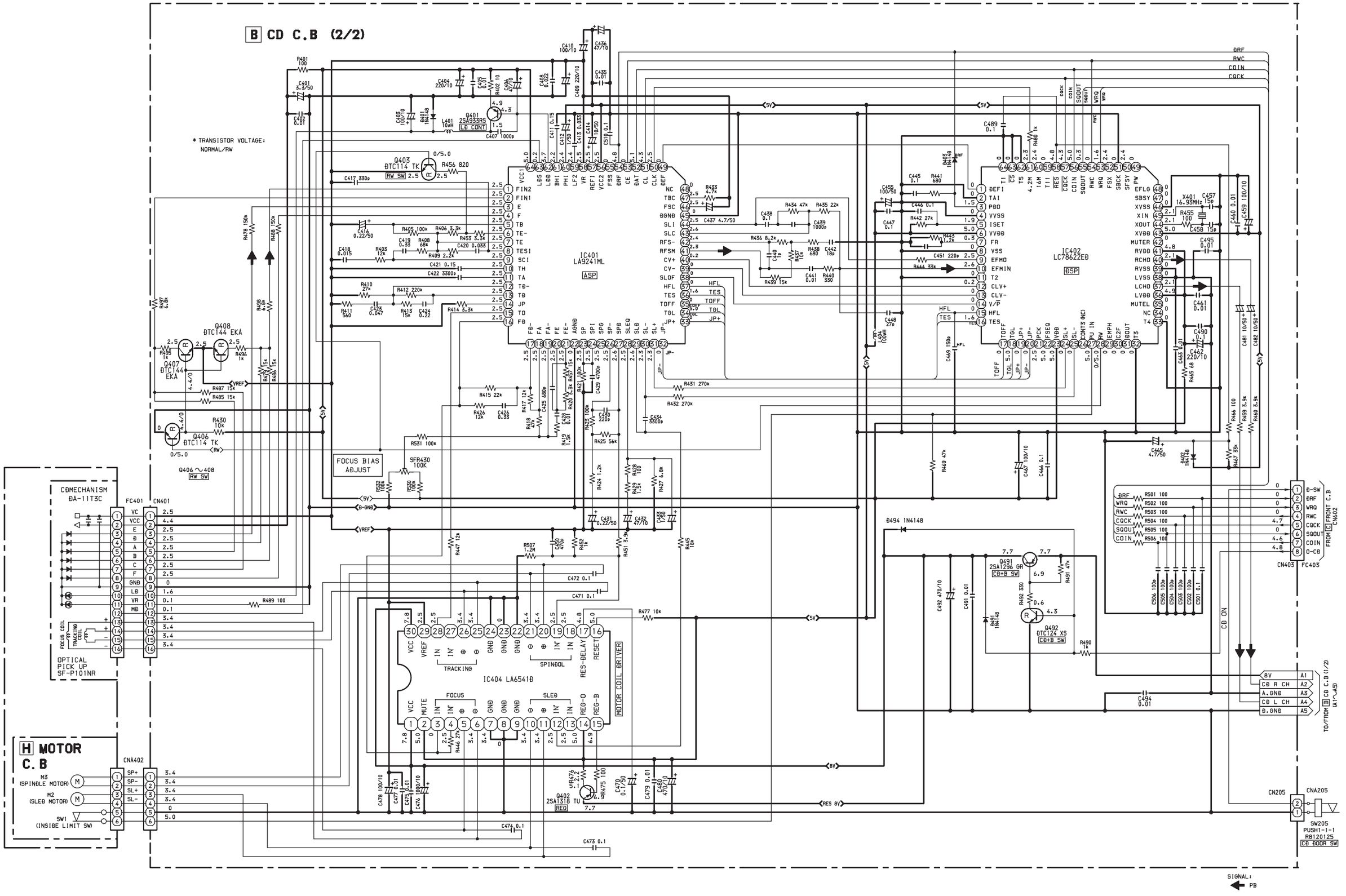



B CD C.B
A MAIN C.B
TO C FRONT C.B
CN602
FC403
TO CN403
SW205
CD DOOR SW
CNA205
TO CN205
TO G BATT1 C.B
CNA901
TO CN301
TO E HP C.B
CNA203
TO CN202
TAPE MECHANISM ZZM-1 YR2NF
M1 (TAPE MOTOR)
S1 (TAPE SW)
TO CN802
SW801
PB
REC
TAPE MECHANISM ZZM-1 YR2NF
CNA801
TO CN801
L
R
RPH
EH
TO CN201
FC201
FROM C FRONT C.B CN601
CNA402
TO H MOTOR C.B
(CD MECHANISM DA11T3C)
TO CN401
FC401
TO CD MECHANISM DA11T3C
TO D TUNER C.B CN002
CNA302

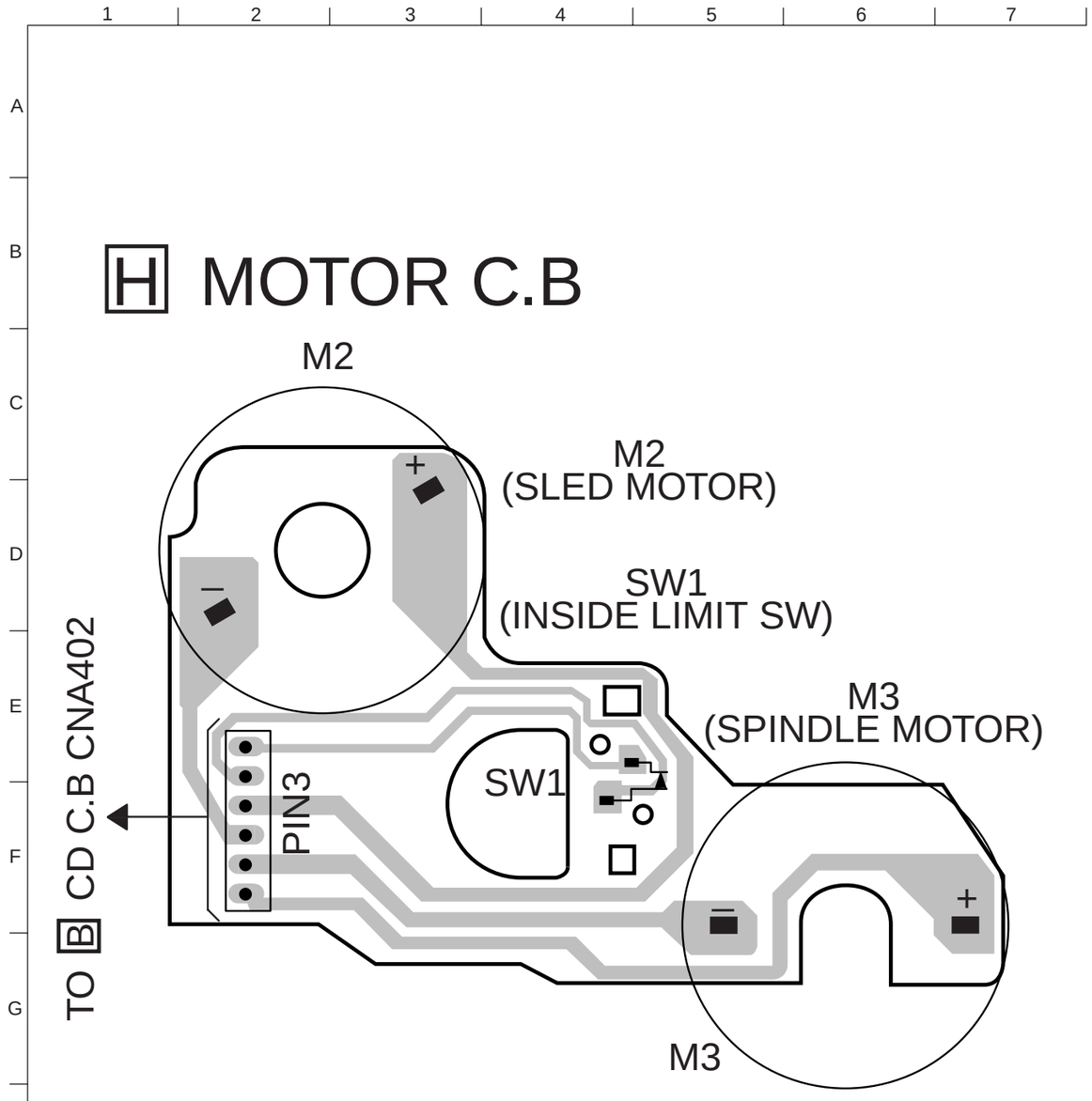
SCHEMATIC DIAGRAM-1 (MAIN)



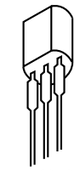
SCHEMATIC DIAGRAM-2 (CD)



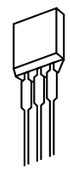
WIRING-2 (MOTOR)



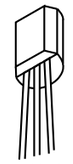
TRANSISTOR ILLUSTRATION



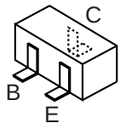
2SA1296
2SC1815



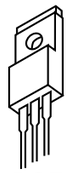
2SA933
2SC1740
DTC114TS
DTC124XS



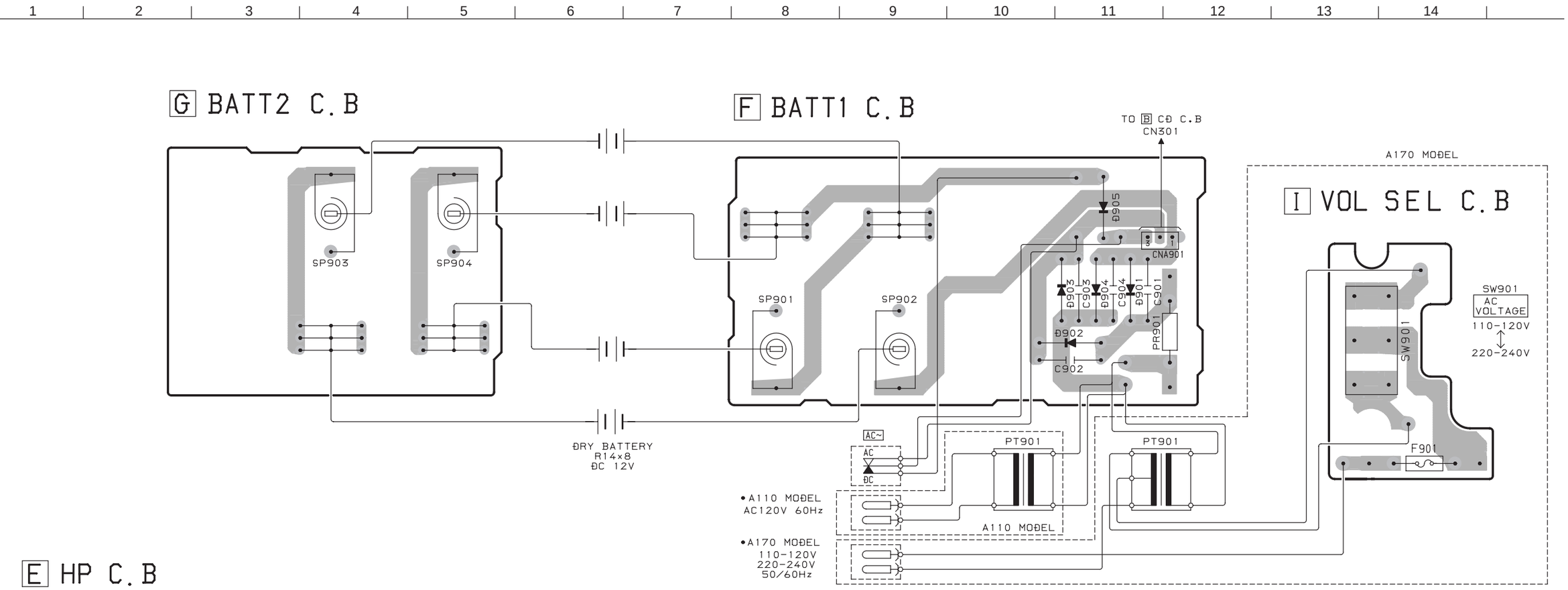
2SA1318

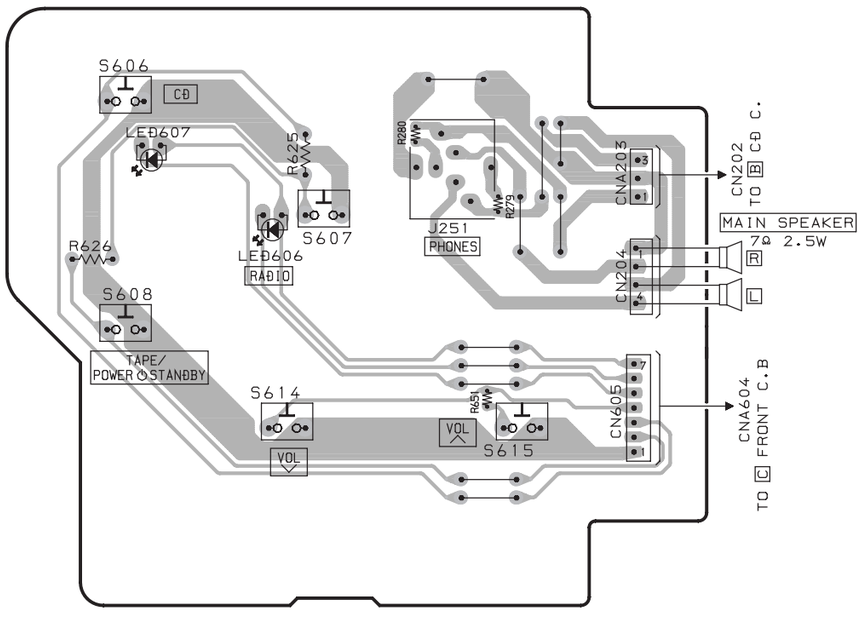


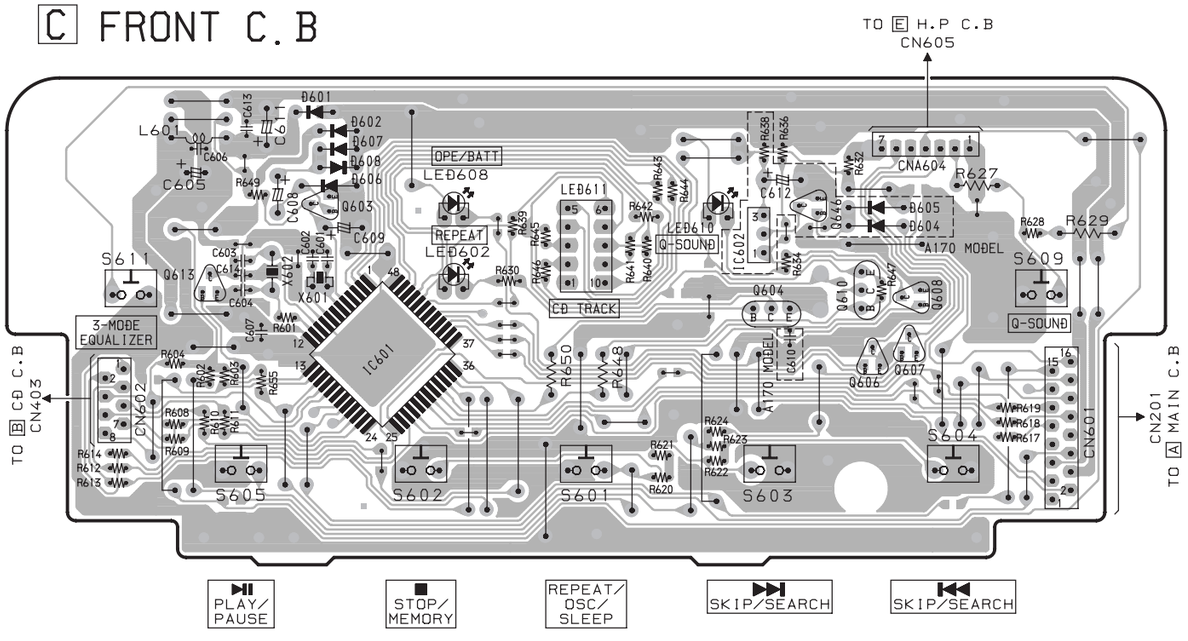
2SC2714
DTC114TK
DTC114YK
DTC124XK
DTC144TK

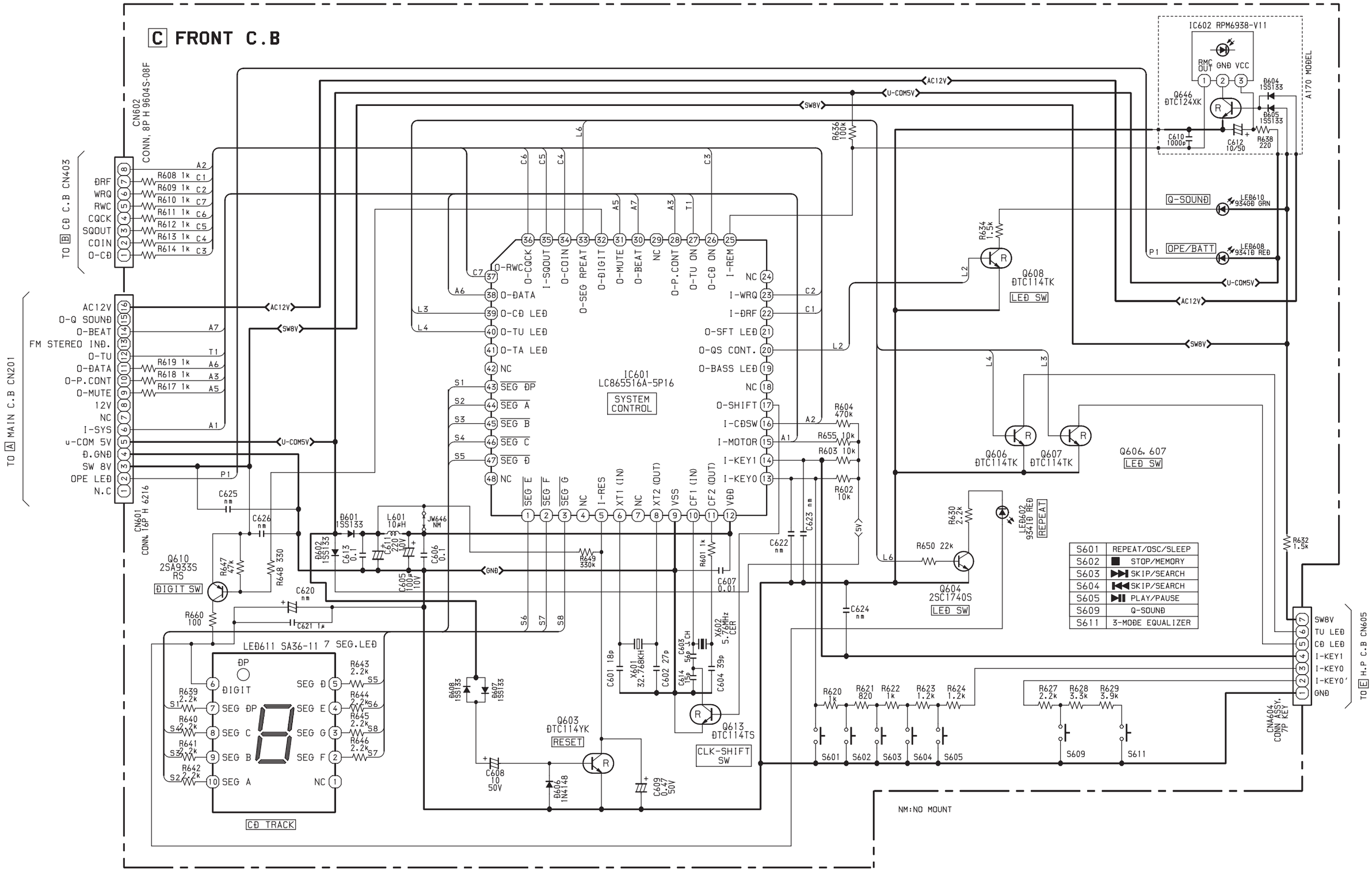


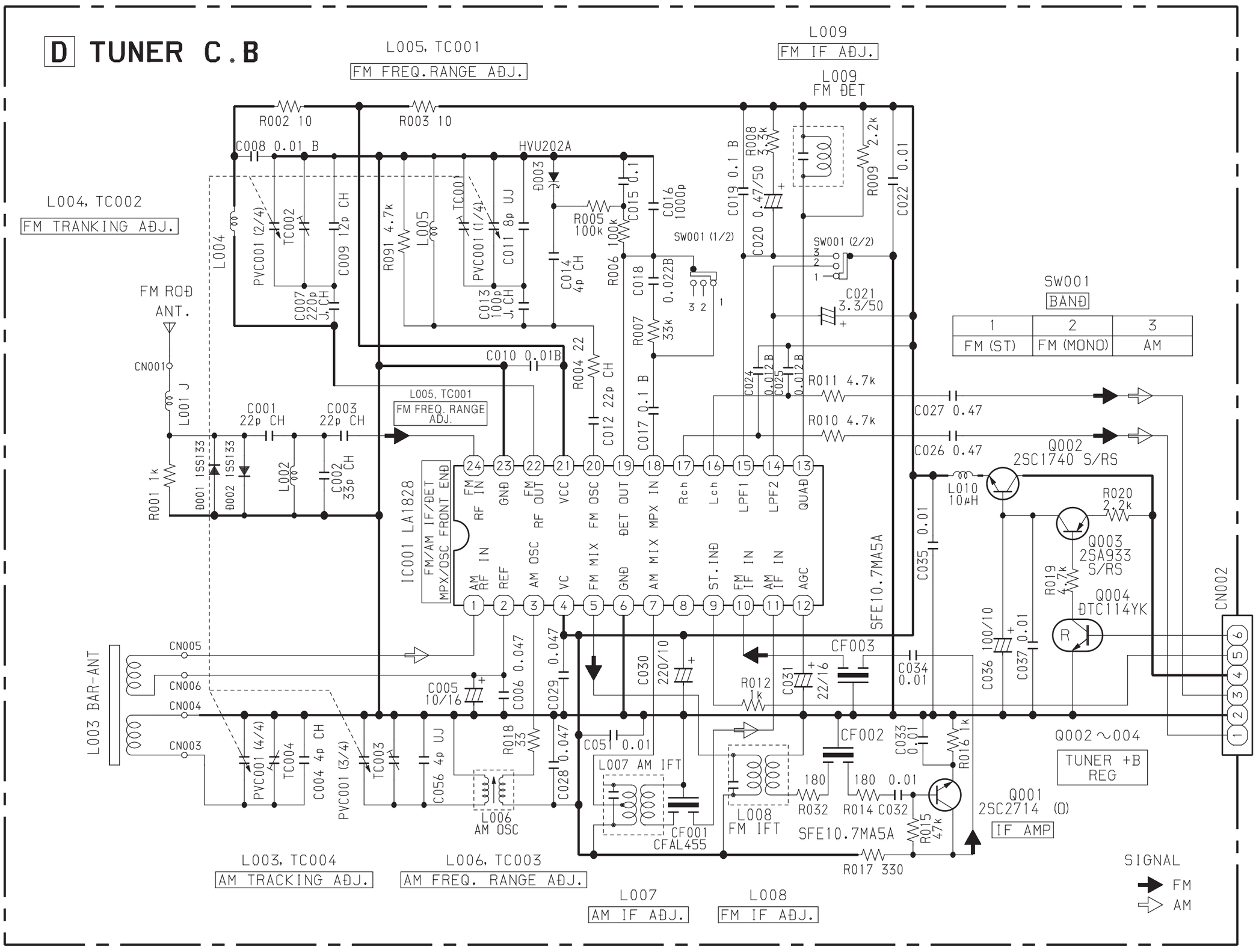
2SB1370


G BATT2 C.B
F BATT1 C.B
SP903
SP904
SP901
SP902
ĐRY BATTERY
R14x8
ĐC 12V
TO B CĐ C.B
CN301
A170 MOĐEL
I VOL SEL C.B
SW901
AC
VOLTAGE
110-120V
220-240V
SW601
F901
CNA901
Đ905
Đ903
C903
Đ904
C904
Đ901
C901
PR901
Đ902
C902
AC~
AC
ĐC
PT901
PT901
•A110 MOĐEL
AC120V 60Hz
A110 MOĐEL
•A170 MOĐEL
110-120V
220-240V
50/60Hz

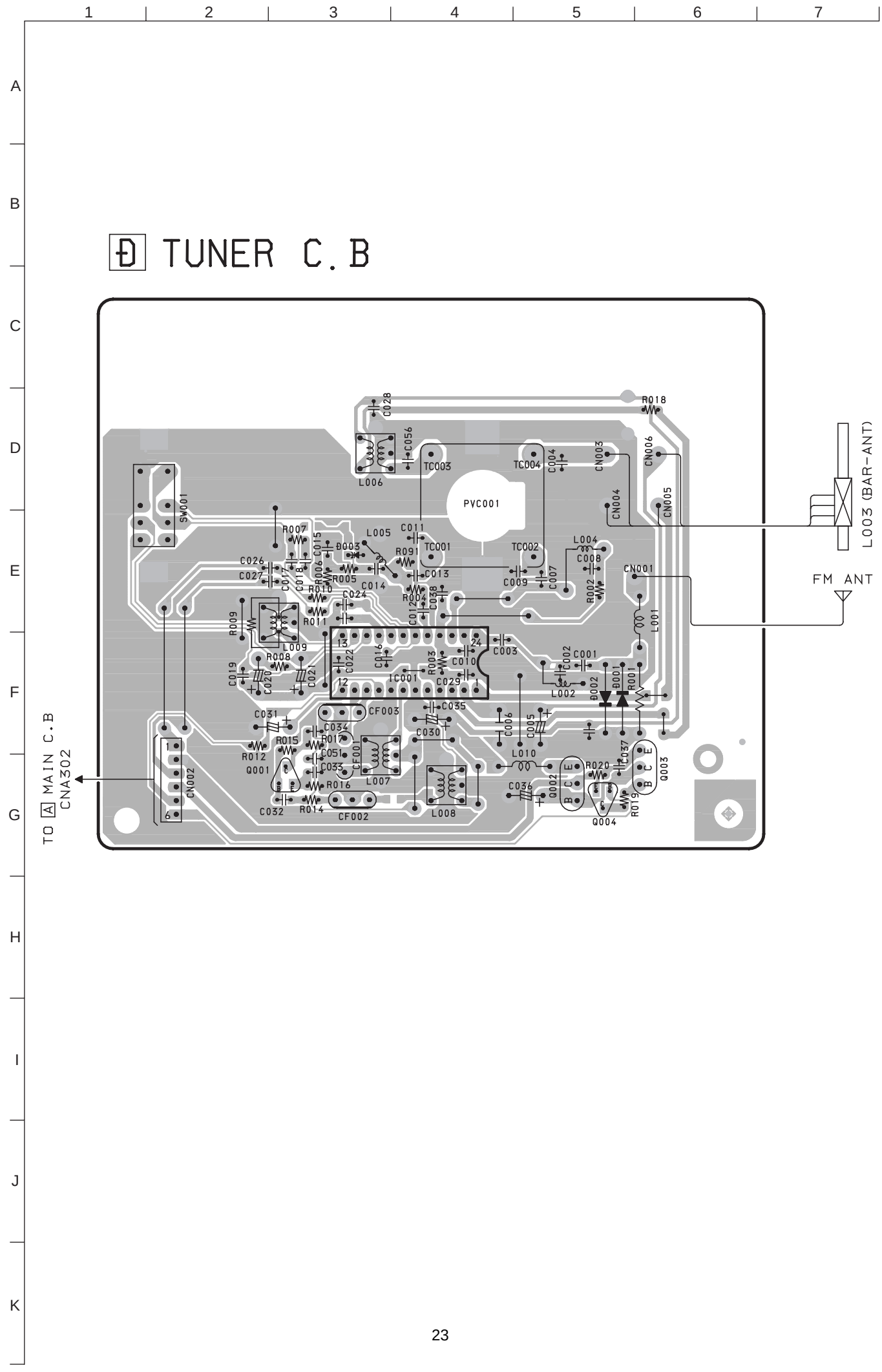

E HP C.B
S606
CĐ
LEĐ607
R625
S607
R626
LEĐ606
RAĐIO
S608
TAPE/
POWER ⏻STANDBY
S614
VOL
VOL
S615
R280
J251
PHONES
CNA203
CN202
TO B CĐ C.
CN204
MAIN SPEAKER
7Ω 2.5W
R
L
CN605
CNA604
TO C FRONT C.B

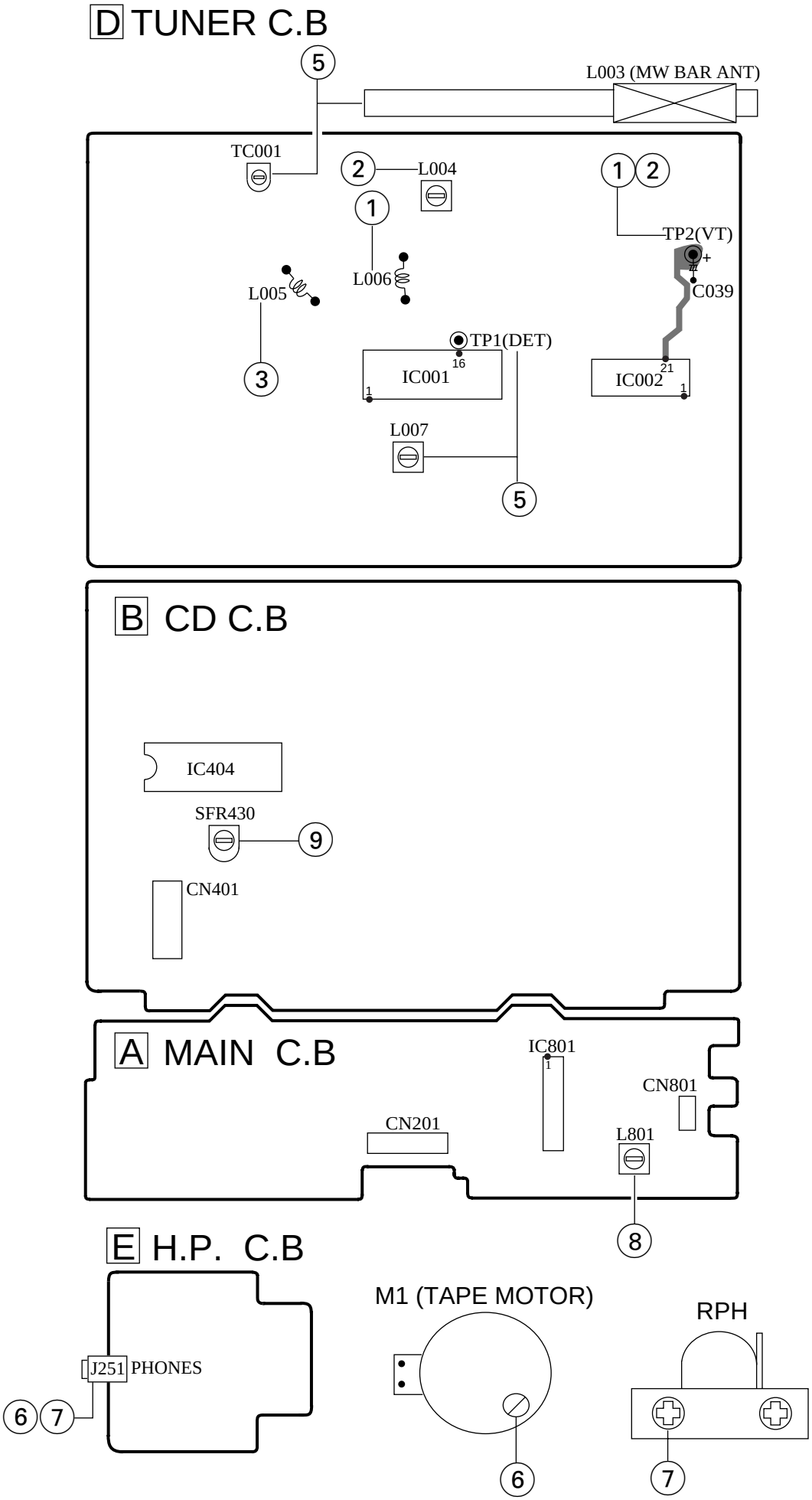

C FRONT C.B
TO E H.P C.B
CN605
L601
C605
C606
C613
C611
Đ601
Đ602
Đ607
Đ608
Đ606
Q603
C608
C609
OPE/BATT
LEĐ608
REPEAT
LEĐ602
LEĐ611
LEĐ610
Q-SOUNĐ
IC602
CNA604
R627
Đ605
Đ604
A170 MOĐEL
R628
R629
S609
Q-SOUNĐ
S611
Q613
X602
X601
C603
C601
C604
C607
R601
3-MOĐE
EQUALIZER
CĐ TRACK
IC601
Q604
A170 MOĐEL
Q610
Q609
Q606
Q607
R650
R648
S605
S602
S601
S603
S604
TO B CĐ C.B
CN403
CN602
CN601
CN201
TO A MAIN C.B
PLAY/
PAUSE
STOP/
MEMORY
REPEAT/
OSC/
SLEEP
SKIP/SEARCH
SKIP/SEARCH


C FRONT C.B
CN602
CONN, 8P H 9604S-08F
TO B CÐ C.B CN403
ÐRF
WRQ
RWC
CQCK
SQOUT
COIN
O-CÐ
R608 1k C1
R609 1k C2
R610 1k C7
R611 1k C6
R612 1k C5
R613 1k C4
R614 1k C3
AC12V
O-Q SOUNÐ
O-BEAT
FM STEREO INÐ.
O-TU
O-ÐATA
O-P.CONT
O-MUTE
12V
NC
I-SYS
u-COM 5V
Ð.GNÐ
SW 8V
OPE LEÐ
N.C
R619 1k A6
R618 1k A3
R617 1k A5
CN601
CONN, 16P H 6216
TO A MAIN C.B CN201
C625 nm
C626 nm
P1
U-COM5V
SW8V
AC12V
GNÐ
IC601
LC865516A-5P16
SYSTEM CONTROL
O-RWC
O-CQCK
I-SQOUT
O-COIN
O-SEG RPEAT
O-ÐIGIT
O-MUTE
O-BEAT
NC
O-P.CONT
O-TU ON
O-CÐ ON
I-REM
O-ÐATA
O-CÐ LEÐ
O-TU LEÐ
O-TA LEÐ
NC
SEG ÐP
SEG A
SEG B
SEG C
SEG Ð
NC
SEG E
SEG F
SEG G
NC
I-RES
XT1 (IN)
NC
XT2 (OUT)
VSS
CF1 (IN)
CF2 (OUT)
VÐÐ
NC
I-WRQ
I-ÐRF
O-SFT LEÐ
O-QS CONT.
O-BASS LEÐ
NC
O-SHIFT
I-CÐSW
I-MOTOR
I-KEY1
I-KEY0
R604 470k
R655 10k
R603 10k
R602 10k
R601 1k
C607 0.01
C622 nm
C623 nm
C624 nm
5V
L1
L2
L3
L4
L5
L6
Ð601 1SS133
L601 10µH
JW646 NM
C613 0.1
C611 220
C606 0.1
C605 100 10V
R649 330k
Q610 2SA933S RS
ÐIGIT SW
R647 47k
R648 330
C620 nm
C621 1µ
R660 100
LEÐ611 SA36-11 7 SEG.LEÐ
ÐP
ÐIGIT
SEG ÐP
SEG C
SEG B
SEG A
SEG Ð
SEG E
SEG G
SEG F
NC
R639 2.2k
R640 2.2k
R641 2.2k
R642 2.2k
R643 2.2k
R644 2.2k
R645 2.2k
R646 2.2k
CÐ TRACK
Ð608 1SS133
Ð607 1SS133
C601 18p
X601 32.768KH
C602 27p
C603 56p
C614 15p
X602 5.76MHz CER
C604 39p
C608 10 50V
Ð606 1N4148
C609 0.47 50V
Q603 ÐTC114YK RESET
Q613 ÐTC114TS CLK-SHIFT SW
IC602 RPM6938-V11
RMC OUT GNÐ VCC
A170 MODEL
Q646 ÐTC124XK
Ð604 1SS133
Ð605 1SS133
C610 1000p
C612 10/50
R638 220
Q-SOUNÐ
LEÐ610 934ÐÐ GRN
OPE/BATT
LEÐ608 93410 REÐ
R636 100k
R634 1.5k
Q608 ÐTC114TK LEÐ SW
Q606 ÐTC114TK
Q607 ÐTC114TK
Q606, 607 LEÐ SW
R630 2.2k
LEÐ602 93410 REÐ REPEAT
R650 22k
Q604 2SC1740S LEÐ SW
R620 1k
R621 820
R622 1k
R623 1.2k
R624 1.2k
R627 2.2k
R628 3.3k
R629 3.9k
S601 S602 S603 S604 S605 S609 S611
S601 REPEAT/OSC/SLEEP
S602 ■ STOP/MEMORY
S603 ▶▶| SKIP/SEARCH
S604 |◀◀ SKIP/SEARCH
S605 ▶|| PLAY/PAUSE
S609 Q-SOUNÐ
S611 3-MODE EQUALIZER
R632 1.5k
CNA604 CONN ASSY, 7P KEY
SW8V
TU LEÐ
CÐ LEÐ
I-KEY1
I-KEY0
I-KEY0'
GNÐ
TO E H.P C.B CN605
NM:NO MOUNT


D TUNER C.B
L005, TCO01
FM FREQ.RANGE AÐJ.
L009
FM IF AÐJ.
L009
FM ÐET
L004, TCO02
FM TRANKING AÐJ.
R002 10
R003 10
C008 0.01 B
HVU202A
ÐO03
R005 100k
C015 0.1
C016 1000p
C019 0.1 B
R008 3.3k
C020 0.47/50
R009 2.2k
C022 0.01
SW001 (1/2)
SW001 (2/2)
SW001
BANÐ
1 FM (ST)
2 FM (MONO)
3 AM
L004
PVC001 (2/4)
TCO02
C009 12p CH
C007 220p J, CH
R091 4.7k
L005
TCO01
PVC001 (1/4)
C011 8p UJ
C013 100p J, CH
C014 4p CH
R006 100k
C018 0.022B
R007 33k
C021 3.3/50
FM ROÐ ANT.
CNOO1
L001 J
C010 0.01B
R004 22
C012 22p CH
C017 0.1 B
C024 0.012B
C025 0.012B
R011 4.7k
R010 4.7k
C027 0.47
C026 0.47
C001 22p CH
C003 22p CH
L005, TCO01
FM FREQ. RANGE ADJ.
Q002 2SC1740 S/RS
L010 10µH
R020 2.2k
Q003 2SA933 S/RS
Q004 ÐTC114YK
R019 4.7k
R001 1k
ÐO01 1SS133
ÐO02 1SS133
L002
C002 33p CH
IC001 LA1828
FM/AM IF/ÐET
MPX/OSC FRONT ENÐ
AM RF IN
REF
AM OSC
VC
FM MIX
GNÐ
AM MIX
ST. INÐ
FM IF IN
AM IF IN
AGC
FM RF IN
GNÐ
FM RF OUT
VCC
FM OSC
ÐET OUT
MPX IN
Rch
Lch
LPF1
LPF2
QUAÐ
SFE10.7MA5A
C035 0.01
CN002
T-ON
ST INÐ.
+B (8V)
L-CH OUT
GNÐ
R-CH OUT
TO A MAIN C.B CNA302
CN005
CN006
CN004
CN003
L003 BAR-ANT
C005 10/16
C006 0.047
C029 0.047
C030 220/10
R012 1k
C031 22/16
CF003
C034 0.01
C036 100/10
C037 0.01
PVC001 (4/4)
TCO04
C004 4p CH
PVC001 (3/4)
TCO03
C056 4p UJ
R018 33
C028 0.047
C051 0.01
L007 AM IFT
CF001 CFAL455
L006 AM OSC
L008 FM IFT
CF002
C033 0.01
R016 1k
Q002 ~004
TUNER +B REG
180
R032
180
R014
0.01
C032
R015 47k
Q001 2SC2714 (O)
IF AMP
SFE10.7MA5A
R017 330
L003, TCO04
AM TRACKING AÐJ.
L006, TCO03
AM FREQ. RANGE AÐJ.
L007
AM IF AÐJ.
L008
FM IF AÐJ.
SIGNAL
FM
AM

WIRING-4 (TUNER)




D TUNER C.B
5
L003 (MW BAR ANT)
TC001
2
L004
1
1 2
TP2(VT)
L006
L005
C039
TP1(DET)
16
IC001
1
IC002
21
1
3
L007
5
B CD C.B
IC404
SFR430
9
CN401
A MAIN C.B
IC801
1
CN801
CN201
L801
8
E H.P. C.B
M1 (TAPE MOTOR)
RPH
J251 PHONES
6 7
6
7

< TUNER SECTION >

1. FM VT Adjustment
   Settings : • Test point : TP2(VT)
   • Adjustment location : L006
   Method : Set to FM 108.0MHz and adjust L006 so that the test point voltage becomes 6.0V ± 0.05V.

2. MW VT Adjustment
   Settings : • Test point : TP2(VT)
   • Adjustment location : L004
   Method : Set to MW 1000kHz (U), and adjust L004 so that the test point voltage becomes 3.75V ± 0.05V.

3. FM Tracking Adjustment
   L005.....98.0MHz

4. MW Tracking Adjustment
   L003.....600kHz
   TC001.....1400kHz

5. AM IF Adjustment
   Settings : • Test point : TP1(DET)
   • Adjustment location : L007
   Method : Adjust L007 so that the output level at 1400kHz becomes maximum.

< DECK SECTION >

6. Tape Speed Adjustment
   Settings : • Test tape : TTA–100
   • Test point : J251 (PHONES jack)
   • Adjustment location : SFR of deck motor
   Method : Play back the test tape and adjust SFR so that the frequency counter reads 3000Hz ± 30Hz.

7. Head Azimuth Adjustment
   Settings : • Test tape : TTA–320
   • Test point : J251 (PHONES jack)
   • Adjustment location : Azimuth adjustment screw
   Method : Play back the 8kHz signal of the test tape and adjust screw so that the output becomes maximum.

8. Bias frequncy Adjustment
   L801.....85kHz±0.5kHz

< CD SECTION >

9. FE Balance Adjustment
   Settings : • Test point : IC401 PIN58 (VR), IC401 PIN 20 (FE)
   • Adjustment location : SFR430
   Method : Playback the disc and adjust SFR430 so that the test point voltage becomes 0V.

PRACTICAL SERVICE FIGURE

< TUNER SECTION >

< FM SECTION >

Sensitivity:	Less than 19dB (88.0MHz)
(THD 3%)	Less than 18dB (98.0MHz)
	Less than 18dB (108.0MHz)
Signal to Noise Ratio:	More than 60dB (at 98.0MHz)
(Input 60dB)	
Distortion:	Less than 1.5% (at 98.0MHz)
(Input 60dB)	
Intermediate frequency:	10.7MHz ±0.1MHz
Stereo separation:	More than 22dB

< AM SECTION >

Sensitivity:	Less than 45dB (at 600kHz)
(S/N 10dB)	Less than 45dB (at 1000kHz)
	Less than 45dB (at 1400kHz)
Distortion:	Less than 1.5%
(Input 74dB)	
Intermediate frequency:	455kHz±3.5kHz

< CASSETTE SECTION >

Tape speed:	3000Hz+3%-2%
Wow & flutter:	Less than 0.35% (JIS RMS)
S/N ratio:	More than 35dB
Distortion:	Less than 3.0% (PB)
Noise (PB):	Less than 1mV (DC, MIN)
	Less than 1.2mV (AC, MIN)
Erasing Ratio (W/O FILTER):	More than 45dB

IC DESCRIPTION

IC, LA9241ML

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Pin to which external pickup photo diode is connected. RF signal is created by adding with the FIN1 pin signal. FE signal is created by subtracting from the FIN1 pin signal.
2	FIN1	I	Pin to which external pickup photo diode is connected.
3	E	I	Pin to which external pickup photo diode is connected. TE signal is created by subtracting from the F pin signal.
4	F	I	Pin to which external pickup photo diode is connected.
5	TB	I	DC component of the TE signal is input.
6	TE-	I	Pin to which external resistor setting the TE signal gain is connected between the TE pin.
7	TE	O	TE signal output pin.
8	TESI	I	TES “Track Error Sense” comparator input pin. TE signal is passed through a band-pass filter then input.
9	SCI	I	Shock detection signal input pin.
10	TH	I	Tracking gain time constant setting pin.
11	TA	O	TA amplifier output pin.
12	TD-	I	Pin to which external tracking phase compensation constants are connected between the TD and VR pins.
13	TD	I	Tracking phase compensation setting pin.
14	JP	I	Tracking jump signal (kick pulse) amplitude setting pin.
15	TO	O	Tracking control signal output pin.
16	FD	O	Focusing control signal output pin.
17	FD-	I	Pin to which external focusing phase compensation constants are connected between the FD and FA pins.
18	FA	I	Pin to which external focusing phase compensation constants are connected between the FD– and FA– pins.
19	FA-	I	Pin to which external focusing phase compensation constants are connected between the FA and FE pins.
20	FE	O	FE signal output pin.
21	FE-	I	Pin to which external FE signal gain setting resistor is connected between the FE pin.
22	AGND	—	Analog signal GND.
23	SP	O	Signal ended output of the CV+and CV- pin input signal.
24	SPI	I	Spndle amp input.
25	SPG	I	Pin to which external spindle gain setting resistor in 12 cm mode is connected.
26	SP-	I	Pin to which external spindle phase compensation constants are connected together with SPD pin.
27	SPD	O	Spindle control signal output pin.
28	SLEQ	I	Pin to which external sled phase compensation constants are connected.
29	SLD	O	Sled control signal output pin.
30, 31	SL-, SL+	I	Sled advance signal input pin from microprocessor.
32, 33	JP-, JP+	I	Tracking jump signal input pin from DSP.
34	TGL	I	Tracking gain control signal input from DSP. Low gain when TGL = H.
35	TOFF	I	Tracking off control signal input pin from DSP. Off when TOFF = H.

Pin No.	Pin Name	I/O	Description
36	TES	O	Pin from which TES signal is output to DSP.
37	HFL	O	“High Frequency Level” is used to judge whether the main beam position is on top of bit or on top of mirror.
38	SLOF	I	Sled servo off control input pin.
39, 40	CV–, CV+	I	CLV error signal input pin from DSP.
41	RFSM	O	RF output pin.
42	RFS-	I	RF gain setting and EFM signal 3T compensation constant setting pin together with RFSM pin.
43	SLC	O	“Slice Level Control” is the output pin which controls the RF signal data slice level by DSP.
44	SLI	I	Input pin which control the data slice level by the DSP.
45	DGND	—	Digital system GND.
46	FSC	O	Output pin to which external focus search smoothing capacitor is connected.
47	TBC	I	“Tracking Balance Control” EF balance variable range setting pin.
48	NC	—	No connection.
49	DEF	O	Disc defect detector output pin.
50	CLK	I	Reference clock input pin. 4.23 MHz of the DSP is input.
51	CL	I	Microprocessor command clock input pin.
52	DAT	I	Microprocessor command data input pin.
53	CE	I	Microprocessor command chip enable input pin.
54	DRF	O	“Detect RF” RF level detector output.
55	FSS	I	“Focus Search Select” focus search mode (± search/+ search) select pin.
56	VCC2	—	Servo system and digital system Vcc pin.
57	REFI	—	Pin to which external bypass capacitor for reference voltage is connected.
58	VR	O	Reference voltage output pin.
59	LF2	I	Disc defect detector time constant setting pin.
60	PH1	I	Pin to which external capacitor for RF signal peak holding is connected.
61	BH1	I	Pin to which external capacitor for RF signal bottom holding is connected.
62	LDD	O	APC circuit output pin.
63	LDS	I	APC circuit input pin.
64	VCC1	—	RF system Vcc pin.

IC, LC78622ED

Pin No.	Pin Name	I/O	Description	
1	DEFI	I	Defect sense signal (DEF) input pin. (Connect to 0V when not used).	
2	TAI	I	For PLL.	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
3	PDO	O		Phase comparator output pin to control external VCO.
4	VVSS	—		GND pin for built-in VCO. Be sure to connect to 0V.
5	ISET	I		Pin to which external resistor adjusting the PD0 output current.
6	VVDD	—		Power supply pin for built-in VCO.
7	FR	I		Pin for VCO frequency range adjustment.
8	VSS	—	Digital system GND. Be sure to connect to 0V.	
9	EFMO	O	For slice level control.	EFM signal output pin.
10	EFMIN	I		EFM signal input pin.
11	T2	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
12, 13	CLV+, CLK-	O	Disc motor control output. Three level output is possible using command.	
14	V/$\overline{P}$	O	Rough servo or phase control automatic selection monitoring output pin. Rough servo at H. Phase servo at L.	
15	HFL	I	Track detect signal input pin. Schmidt input.	
16	TES	I	Tracking error signal input pin. Schmidt input.	
17	TOFF	O	Tracking OFF output pin.	
18	TGL	O	Tracking gain selection output pin. Gain boost at L.	
19, 20	JP+, JP-	O	Track jump control signal output pin. Three level output is possible using command.	
21	PCK	O	EFM data playback clock monitoring pin 4.3218 MHz when phase is locked in.	
22	FSEQ	O	Sync signal detection output pin. H when the sync signal which is detected from EFM signal and thesync signal which is internally generated agree.	
23	VDD	—	Digital system power supply pin.	
24	SL+	O	Moves the sled to outer circumference.	
25	SL-	O	Moves the sled to inner circumference.	
26	—	—	Not connected.	
27	PUIN	I	CD pickup inner switch detection.	
28	$\overline{RW}$	O	Read, wright signal.	
29	EMPH	O	De-emphasis monitor output pin. De-emphasis disc is being played back at H.	
30	C2F	O	C2 flag output pin.	
31	DOUT	O	DIGITAL OUT output pin. (EIAJ format).	
32, 33	T3, T4	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
34	N.C.	—	Not used. Set the pin to open.	
35	MUTEL	O	L-channel 1-bit DAC.	L-channel mute output pin.
36	LVDD	—		L-channel power supply pin.
37	LCHO	O		L-channel output pin.
38	LVSS	—		L-channel GND. Be sure to connect to 0V.
39	RVSS	—	R-channel 1-bit DAC.	R-channel GND. Be sure to connect to 0V.
40	RCHO	O		R-channel output pin.
41	RVDD	—		R-channel power supply pin.
42	MUTER	O		R-channel mute output pin.

Pin No.	Pin Name	I/O	Description
43	XVDD	—	Crystal oscillator power supply pin.
44	XOUT	O	Pin to which external 16.9344 MHz crystal oscillator is connected.
45	XIN	I	
46	XVSS	—	Crystal oscillator GND pin. Be sure to connect to 0V.
47	SBSY	O	Subcode block sync signal output pin.
48	EFLG	O	C1, C2, single and dual correction monitoring pin.
49	PW	O	Subcode P, Q, R, S, T, U and W output pin.
50	SFSY	O	Subcode frame sync signal output pin. Falls down when subcode enters standby.
51	SBCK	I	Subcode read clock input pin. Schmidt input. (Be sure to connected to 0V when not in use.)
52	FSX	O	Pin outputting the 7.35 kHz sync signal which is generated by dividing frequency of crystal oscillator.
53	WRQ	O	Subcode Q output standby output pin.
54	RWC	I	Read/write control input pin. Schmidt input.
55	SQOUT	O	Subcode Q output pin.
56	COIN	I	Command input pin from microprocessor.
57	$\overline{\text{CQCK}}$	I	Command input read clock or subcode read input clock from SQOUT pin
58	RES	I	LC78622 reset input pin. Set this pin to L once when the main power is turned on.
59	T11	O	Test signal output pin. Use this pin as open (normally L output).
60	16M	O	16.9344 MHz output pin.
61	4.2M	O	4.2336 MHz output pin.
62	T5	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
63	$\overline{\text{CS}}$	I	Chip select signal input pin with built-in pull-down resistor. Be sure to connect to 0V while it is not controlling.
64	T1	I	Test signal input pin without built-in pull-down resistor. Be sure to connect to 0V.

IC, LC865516A-5P16

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{SEG E}}$	O	SEG E control.
2	$\overline{\text{SEG F}}$	O	SEG F control.
3	$\overline{\text{SEG G}}$	O	SEG G control.
4	NC	—	Not connected.
5	I-RES	I	Micro processor reset input
6	XT(IN)	I	Connected to an external 32.768 kHz crystal oscillator.
7	NC	—	Not connected.
8	XT2(OUT)	O	Connected to an external 32.768 kHz crystal oscillator.
9	VSS	—	GND.
10	CF1(IN)	I	Connected to an external 5.76 MHz ceramic filter.
11	CF2(OUT)	O	Connected to an external 5.76 MHz ceramic filter.
12	VDD	—	Microprocessor power supply (+5V).
13	I-KEY0	I	Key AD input. (AD)
14	I-KEY1	I	Key AD input. (AD)
15	I-MOTOR	I	Deck status input. (AD)
16	I-CD SW	I	CD door switch status input.
17	O-SHIFT	O	Main clock shift output.
18	NC	—	Not connected.
19	O-BASS LED	O	BASS LED ON/OFF control output. (Not connected)
20	O-QS LED	O	Q sound LED ON/OFF control output. (Not connected)
21	O-SFT LED	—	Not connected.
22	I-DRF	I	CD RF level detection input.
23	I-WRQ	I	CD subcode Q standby input.
24	NC	—	Not connected.
25	I-REM	—	Remote control input.
26	O-CD ON	O	CD power control output.
27	O-TU ON	O	TU power control output.
28	O-P.CONT	O	The main power supply control output.
29	NC	—	Not connected.
30	O-BEAT	O	Beat control.
31	O-MUTE	O	Main mute output.
32	O-DIGIT	O	7-segment LED power supply control output.
33	O-SEG RPEAT	O	REPEAT LED ON/OFF control output.
34	O-COIN	O	CD command output.
35	I-SQOUT	I	CD subcode Q input.
36	O-CQCK	O	CD command/CLK for subcode.
37	O-WRC	O	CD read/write control output.
38	O-DATA	O	Data output to M62349FP.
39	O-CD LED	O	LED ON/OFF control output for the CD function.
40	O-TU LED	O	LED ON/OFF control output for the TU function.
41	O-TA LED	O	LED ON/OFF control output for the TA function. (Not connected)

Pin No.	Pin Name	I/O	Description
42	NC	—	Not connected.
43	$\overline{\text{SEG DP}}$	O	SEG DP control.
44	$\overline{\text{SEG A}}$	O	SEG A control.
45	$\overline{\text{SEG B}}$	O	SEG B control.
46	$\overline{\text{SEG C}}$	O	SEG C control.
47	$\overline{\text{SEG D}}$	O	SEG D control.
48	NC	—	Not connected.

MECHANICAL PARTS LIST 1/1

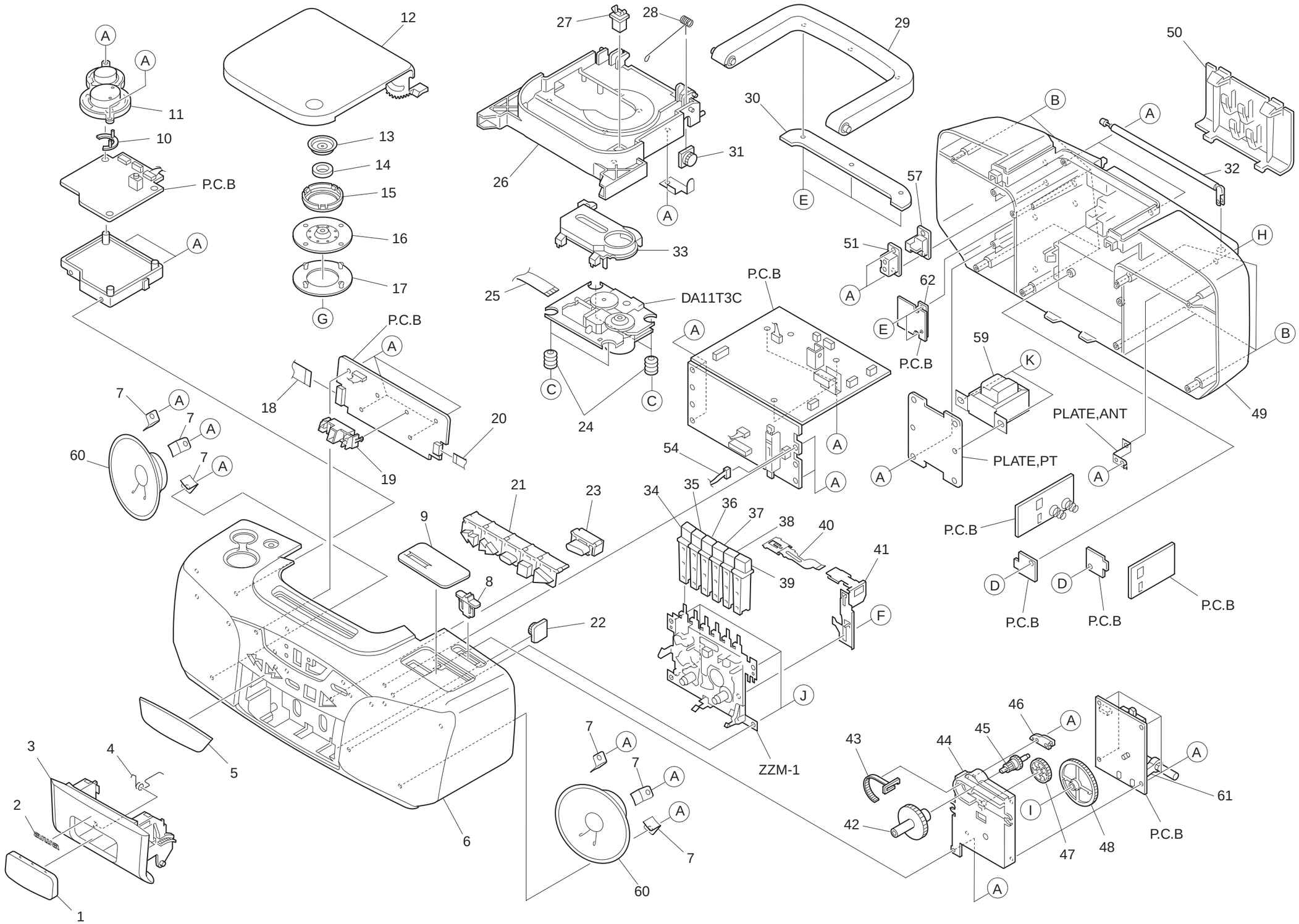
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CDA-006-010		WINDOW,CASS
2	87-B00-010-010		BADGE,AIWA 30.5-5.2 S 2.5L
3	8A-CDA-003-010		LID,CASS
4	8A-CDA-212-010		SPR-T,CASS
5	8A-CDA-008-010		WINDOW,LED<A110 U<S>>
5	8A-CDL-031-010		WINDOW,LED<A170 LH<S>>
6	8A-CDA-028-010		CABI ASSY,FRONT
7	8A-CDA-206-010		HLDR,SPKR
8	8A-CDA-020-010		KNOB,SL BAND
9	8A-CDA-009-010		WINDOW,TU
10	8A-CDA-007-010		LENS,LED
11	8A-CDA-019-010		KEY,VOL
12	8A-CDA-004-010		LID,CD
13	8A-CDA-213-010		COVER, CHUCK
14	87-036-368-010		MAGNET
15	8A-CDA-207-010		HLDR,CHUCK
16	8Z-CDB-170-010		BASE,CHUCK
17	88-CD9-211-210		RING,CHUCK
18	8A-CDA-620-010		FF-CABLE,16P FR-MAIN
19	8A-CDA-208-010		HLDR,LED
20	8A-CDA-622-010		FF-CABLE,8P CD-FR
21	8A-CDA-016-010		KEY,CD
22	87-063-165-010		OIL-DMPR 150
23	8A-CDA-017-010		KEY,MODE
24	88-CH6-220-010		CUSHION,CD A
25	8A-CDA-621-010		FF-CABLE,16P CD-RF
26	8A-CDA-012-010		CHAS,CD
27	87-036-389-010		SW,PUSH LOCK
28	8A-CDA-211-010		SPR-T,CD
29	8A-CDA-010-010		HANDL,ARM
30	8A-CDA-011-010		HANDL,COVER
31	87-NF8-220-010		DMPR,150<A110 U<S>>
32	8Z-CH4-640-010		ANT,ROD
33	8Z-CDB-169-010		PANEL,CD SANYO
34	8A-CDA-027-010		KEY,PAUSE
35	8A-CDA-026-010		KEY,STOP
36	8A-CDA-025-010		KEY,FF
37	8A-CDA-024-010		KEY,REW
38	8A-CDA-023-010		KEY,PLAY
39	8A-CDA-022-010		KEY,REC
40	8A-CDA-221-010		SPR-P,REC
41	8A-CDA-220-010		PLATE,REC
42	8A-CDA-021-010		KNOB,RTRY TU
43	8A-CDA-013-010		POINTER,TU
44	8A-CDA-201-010		HLDR,TU
45	8A-CDA-216-010		GEAR,TU B
46	8A-CDA-203-010		GUIDE,GEAR
47	8A-CDA-202-010		GEAR,RELAY
48	8A-CDA-215-010		DRUM,TU
49	8A-CDA-002-010		CABI,REAR<A110 U<S>>
49	8A-CDA-030-010		CABI,REAR LH<A170 LH<S>>
49	8A-CDL-030-010		CABI,REAR LH<A170 LH<S>>
50	8A-CDA-005-010		LID,BATT
51	8Z-CD5-634-010		COVER,AC SOCKET
52	8A-CDA-626-010		CONN ASSY,2P DOOR
53	8A-CDA-630-010		CONN ASSY,4P RPH
54	8A-CDA-633-010		CONN ASSY,4P SP
55	8A-CDA-631-010		CONN ASSY,4P TA-ME
56	8A-CDA-204-010		HLDR,VOL<A170 LH<S>>
⚠ 57	87-A60-178-010		JACK,AC E W/SW<A170 LH<S>>
⚠ 57	87-A60-177-010		JACK,AC U W/SW<A110 U<S>>
58	8A-CDA-018-010		KEY,QSOUND
⚠ 59	8A-CDA-612-010		PT,E 2.5W<A170 LH<S>>
⚠ 59	8A-CDA-611-010		PT,U 2.5W<A110 U<S>>
60	8A-CH4-682-010		SPKR,10- 7OHM<A110 U<S>>
60	88-CD9-626-010		SPKR,100 7OHM 3W<A170 LH<S>>
61	88-CD6-661-010		HLDR,BAR ANT.<A110 U<S>>
62	87-A91-369-010		SW,AC SL 2 2 2 SDKGA41700<A170 LH<S>>
A	87-721-096-410		QT2+3-10 GLD
B	87-753-104-410		VT2+3-30 W/0 BLK<A170 LH<S>>
C	8A-CK4-223-010		S-SCREW,CD
D	87-067-566-010		TAPPING SCREW, VFTT+3-6<A170 LH<S>>
E	87-352-075-210		VT2+2.6-10<A170 LH<S>>
F	8A-CDA-222-010		S-SCREW,CASS+2.6-4<A110 U<S>>
H	87-253-097-410		U+3-12 BLK<A110 U<S>>
I	87-261-073-410		V+2.6-6<A110 U<S>>
J	87-751-096-410		VT2+3-10 GLD

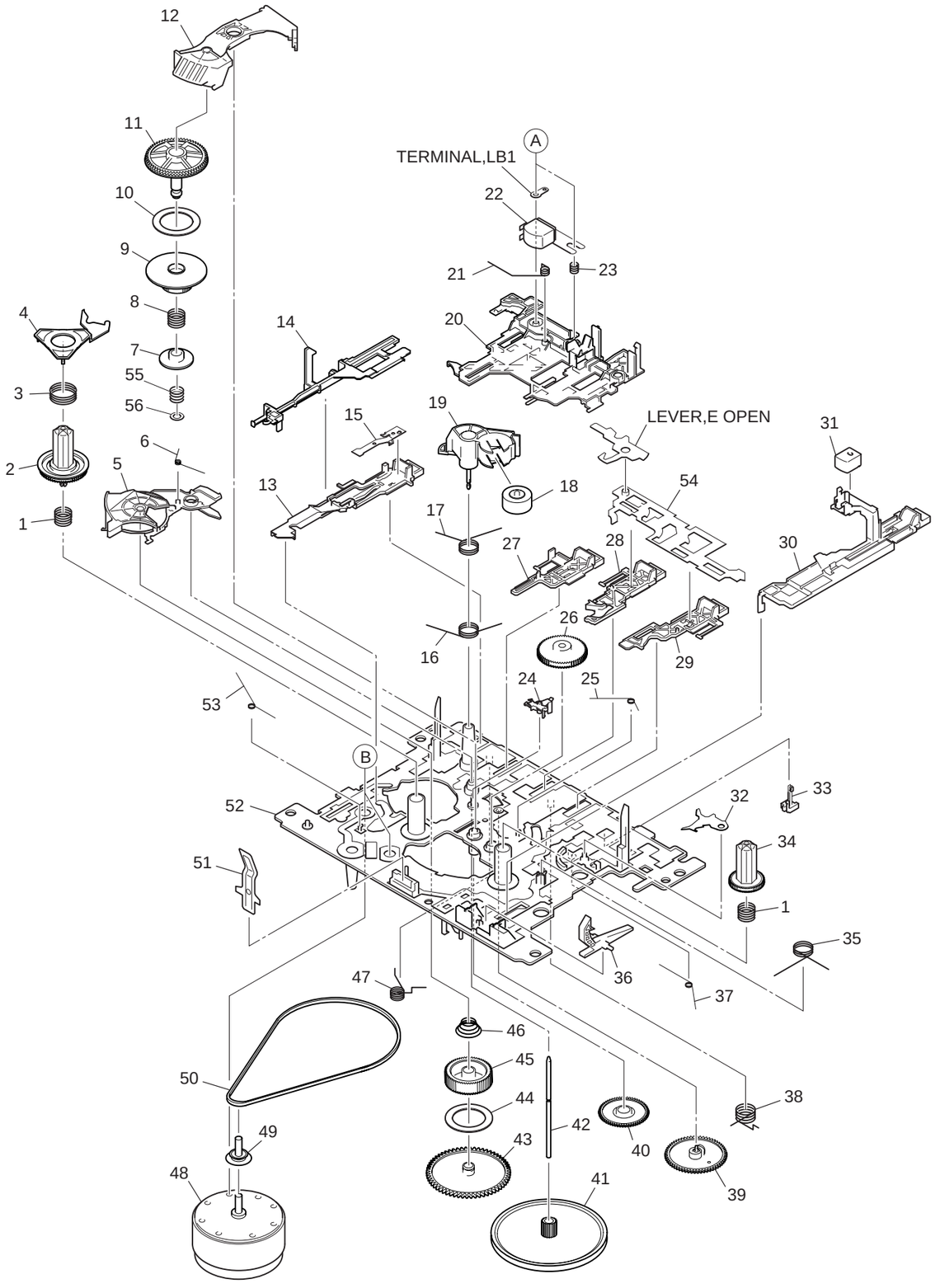
COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

MECHANICAL EXPLODED VIEW 1/1



TAPE MECHANISM EXPLODED VIEW 1/1



TAPE MECHANISM PARTS LIST 1/1

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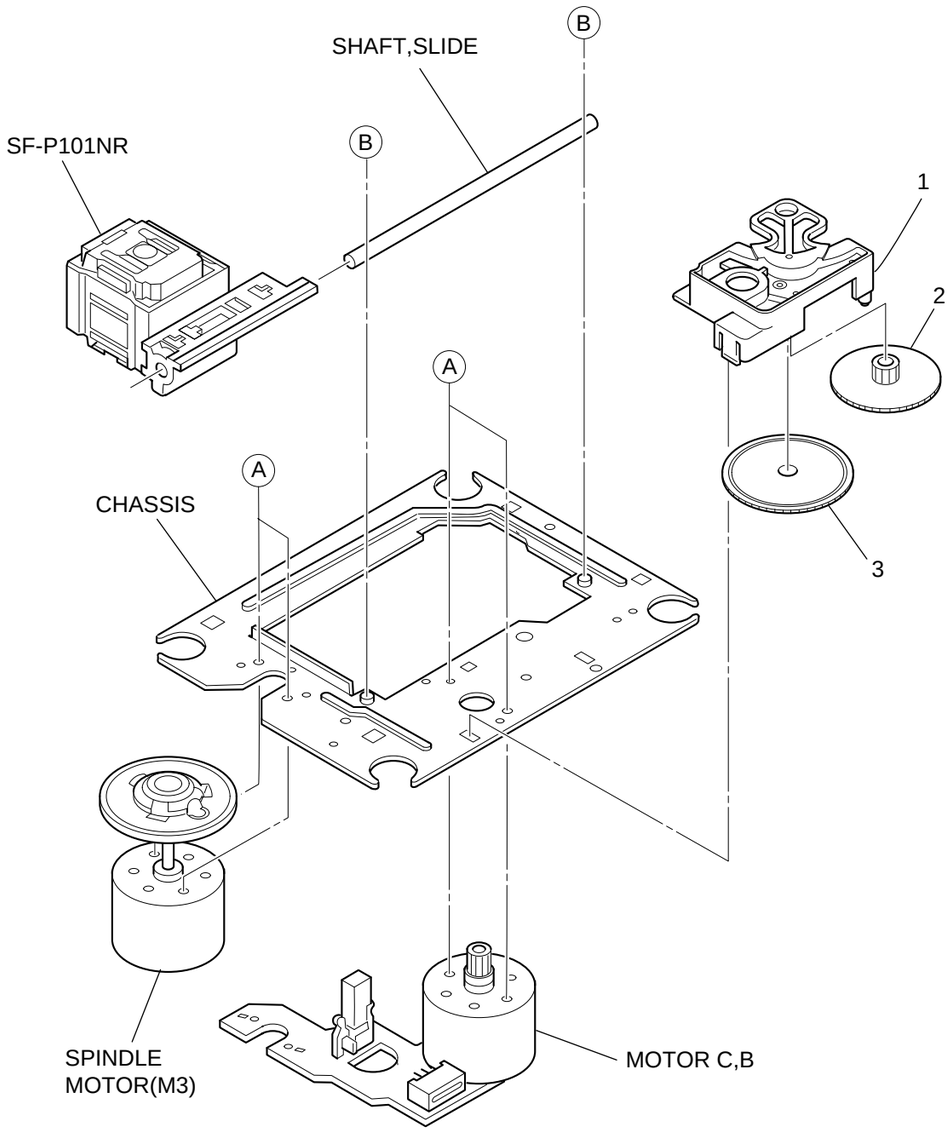
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM1-254-210		SPR-C,REEL R
2	8Z-ZM1-225-110		GEAR,REEL R
3	8Z-ZM1-253-110		SPR-C,AUTO SENSOR
4	8Z-ZM1-217-110		LEVER,AUTO SENSOR
5	8Z-ZM1-212-110		LEVER,T-UP
6	8Z-ZM1-245-010		SPR-T,AUTO
7	8Z-ZM1-236-010		CLR,SLIP FF/REW
8	8Z-ZM1-252-010		SPR-C,FF/REW
9	8Z-ZM1-230-010		GEAR,SLIP FF/REW A
10	8Z-ZM1-266-010		FELT,FF/REW
11	8Z-ZM1-231-010		GEAR,SLIP FF/REW B
12	8Z-ZM1-213-010		LEVER,FF/REW
13	8Z-ZM1-209-110		LEVER,PAUSE
14	8Z-ZM1-222-010		LEVER,E-LOCK M
15	8Z-ZM1-256-010		SPR-P,PAUSE
16	8Z-ZM1-244-010		SPR-T,T-UP
17	8Z-ZM1-247-210		SPR-T,PINCH
18	8Z-ZM1-261-110		ROLLER ASSY,PINCH
19	8Z-ZM1-221-010		LEVER,PINCH
20	8Z-ZM1-205-210		LEVER,PLAY
21	8Z-ZM1-248-010		SPR-T,BRG
22	87-A90-403-110		HEAD,RPH MS15R
23	84-ZM2-227-310		SPR-C,AZIMUTH
24	8Z-ZM1-216-010		LEVER,AUTO
25	8Z-ZM1-246-010		SPR-T,AUTO 2
26	8Z-ZM1-233-010		GEAR,IDL REW
27	8Z-ZM1-208-010		LEVER,STOP
28	8Z-ZM1-207-010		LEVER,FF
29	8Z-ZM1-206-010		LEVER,REW
30	8Z-ZM1-211-110		LEVER,REC 2
31	87-A91-533-010		HEAD,EH PH-K380
32	8Z-ZM1-215-010		LEVER,REC LOCK
33	87-A91-492-010		SW,LEAF MSW18560
34	8Z-ZM1-226-010		GEAR,REEL L
35	8Z-ZM1-241-010		SPR-T,PLAY
36	8Z-ZM1-220-010		LEVER,REC SENSOR
37	8Z-ZM1-249-010		SPR-T,FR
38	8Z-ZM1-242-110		SPR-T,FF/REW
39	8Z-ZM1-229-010		GEAR,CAM
40	8Z-ZM1-232-010		GEAR,IDL FF/REW
41	8Z-ZM1-234-010		FLY-WHL,ZZM-1
42	8Z-ZM1-267-010		SHAFT,CAPSTAN 2
43	8Z-ZM1-228-010		GEAR,SLIP T-UP B
44	8Z-ZM1-265-010		FELT,T-UP
45	8Z-ZM1-227-010		GEAR,SLIP T-UP A
46	8Z-ZM1-251-110		SPR-C,T-UP SLIP
47	8Z-ZM1-243-210		SPR-T,STOP/PAUSE
48	87-A91-531-010		MOT,MS15C2L
49	8Z-ZM1-271-010		PULLEY,MOT ZZM-1
50	8Z-ZM1-264-010		BELT,MAIN S
51	8Z-ZM1-260-010		SPR-P,CASETTE
52	8Z-ZM1-201-310		CHAS ASSY,ZZM-1
53	8Z-ZM1-255-110		SPR-T,E-LOCK
54	8Z-ZM1-214-010		LEVER,LOCK
55	8Z-ZM1-257-110		SPR-C,F/R
56	8Z-ZM1-275-010		W-L,1.47-4-0.25
A	84-ZM2-242-010		S-SCREW,AZ1-2-6.4
B	8Z-ZM1-270-110		V+2.6 ZZM-1

CD MECHANISM EXPLODED VIEW 1/1



CD MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S2-121-A28-400		COVER GEAR
2	S2-511-A21-000		GEAR MIDDLE
3	S2-511-A21-100		GEAR,DRIVE
A	S1-PN2-03R-OSE		SCR PAN PCS 2-3
B	87-261-073-410		SCR S-TPG FLT 2.6-6
ALL	M8-ZZK-E90-070		DA11T3C

ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CDL-902-010		IB,LH(ESP)FM<A170 LH<S>>
1	8A-CDA-903-010		IB,U(ESF)FM<A110 U<S>>
2	8Z-CDK-962-010		RC UNIT,RC-ZAT02(VS)<A170 LH<S>>
⚠ 3	87-A80-036-010		AC CORD SET ASSY,E W/FLTR VOL <A170 LH<S>>
⚠ 3	87-A80-109-010		AC CORD,HK7281 BLK U<A110 U<S>>
⚠ 4	87-A90-312-010		PLUG,CONVERSION WTN-1157R1 <A170 LH<S>>

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